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March 15, 2004

U.S. Environmental Protection Agency
Martha Bosworth
Office Of Site Remediation and Restoration (HBS)
One Congress Street, Suite 1100
Boston, MA 02114
Attention - Wells G&H Case Team

Re Our Client : LAMCO

In follow up to the above matter, please be advised that this office has been retained by James Lamm on behalf of LAMCO Chemical Company, Inc.

Please find the enclosed responses from our client.

In summary, LAMCO started operation in about 1949 and as a result of market changes their business has decreased to the point of barley surviving.

In general, all paperwork prior to 1985 was destroyed as a result of the firefighting efforts concerning the Chelsea fire of 1973 and a flooded storage area in 1985.

Our client has used his best efforts to put together the enclosed responses.

In compiling his response, our client also relied upon the best memories of Mr. George Lamm (age 81) and Frank Bassett (age 70-75).

Should you have any questions regarding this correspondence or require further information, please do not hesitate to call.

Sincerely,

Gordon E. Feener, Esq.

GEF/jal
cc: Client

1. General information

a. Lamco Chemical Company, Inc.,
212 Arlington Street
Chelsea, MA 02150
617 884-8470

b.

1. i. George L. Lamm (age 81)
ii. Retired Past President and working part-time at Lamco
iii. 212 Arlington Street, Chelsea, MA 02150
iv. (617) 884-8470

2. i. James G. Lamm
ii. President
iii. 212 Arlington Street, Chelsea, MA 02150
iv. (617) 884-8470

c. None at this time.

d. None

2. a. Lamco Chemical Company has not done business under any other names

a1. Names of companies owned by James G. Lamm.
i. Lamco Environmental Systems Inc.,
212 Arlington Street Chelsea, MA 02150
ii. April 3, 1985

i. Fuzzy Fibres
212 Arlington Street Chelsea, MA 02150.
ii 1985

b. i. July 1949,

ii. Massachusetts.

iii. Unknown.

c. Not applicable.

d. Were not investigated

e. We had no predecessors.

f. Not applicable.

g. Not applicable.

3. Operation

a1. Lamco Chemical Company, Inc.,
33 Commercial Wharf,
Boston, MA (prior 1965)

a2. Lamco Chemical Company, Inc.,
212 Arlington Street,
Chelsea, MA. (1965 to present)

b. i. July 1949 to present.

ii. Manufactured water based chemical specialties, filled manufactured products into containers, sold these products as well as other janitorial supplies, and shipped same.

iii. Manufactured and formulated water emulsion floor waxes, aqueous floor finishes and sealers, water dispersible floor cleaners, soaps and all purpose cleaners, floor wax removers, aqueous degreasers, non-acid bowl cleaners, glass cleaners, liquid dish-washing compounds and rug shampoos.

c i1. None of the chemicals listed on enclosure F were produced at our facility.

i2. None of the chemicals listed on enclosure F were processed at our facility.

i3. Isopropyl Alcohol; Ludox (Silica) were used in our manufacturing process.

ii1. Isopropyl Alcohol;
ii2. Silica

d. Lamco Chemical Company began operation in 1949. For the next sixteen years it was solely a manufacturing facility, manufacturing products used in the janitorial field. After 1965, introduction of "janitorial supplies" helped our sales. Market influences also had an effect on sales. During the first sixteen years, floor wax coating were the norm. These products required daily maintenance, weekly application, and monthly removal. Our manufactured volume was significant. After 1965, floor finish coatings started to become the norm, requiring a once per year application, and a limited maintenance program. The only way to increase sales was to acquire more customers, or broaden the product line. Which was done by acquisition of a distributor of ours, and hiring

sales people. Sales have reached a high of $800,000 and dropped to the current number of less than $195,000. The advent of mass marketers, mass distribution companies, and large manufacturing companies has also had grave effects on Lamco.

e. Manufactured and formulated water emulsion floor waxes, aqueous floor finishes and sealers, water dispersible floor cleaners, soaps and all purpose cleaners, floor wax removers, aqueous degreasers, non-acid bowl cleaners glass cleaners, liquid dish-washing compounds and rug shampoos. We also manufactured bases for internal use in our processes. **See Exhibit A (Exhibit 1)**

See Exhibit B (Exhibit 2)
f. Raw materials used:
325 - N -35, 43 - N -40, 371 - n -30. No CAS # available. Stopped using in 1980. All three are non-ionic water soluble wax emulsions.
Paraffin wax,
Ouricury.
Carnauba wax.
Micro-crystalline waxes.
Ozokorite.
Syntran #6150 - #1445 - #1465 (Interpolymer)
Ammonia, 26 BaumŒ CAS # 7664-41-7.
Stepanol BTC 2125 Quarternary ammonium compound.
(Chemical name: Myristalkonium Chloride & Quaternium 14)
No CAS # available.
Triton X-100 (9 mole non-ionic surfactant) CAS # 9016-45-9.
Liquid Caustic Potash (45%). CAS # 1310-58-3.
Chelon 100, EDTA. (Tetra sodium EDTA 50% solution. CAS # 64-02-8
Above also purchased under various other trade names:
HAMPENE - PERMA KLEER - MIDENE.
Di-Ethylene Glycol Mono Ethyl Ether. CAS # 111-90-0
Di-Ethylene Glycol Methyl Ether. CAS # 111-77-3
Di-Butyl Phthalate. CAS # 84-74-2
Aqueous acrylic emulsions:
Duraplus I (Rohm & Haas)
Rhoplex B-60A - B-85 - B-832 (Rohm & Haas)
DRP 62 - UL 2001 - U 3050 (Union Bay State Chemical)
SR 270 - A 234 U (Poly Vinyl)
Richamer R-272 (Richardson Co. Paterson NJ)
Product # 403 (Morton Chemical)
Syntran #1015 - # 1440 - #1272 - #1292 - #1295 - #1560.
(Syntran from Interpolymer Corporation)
Ethylene Glycol Mono Butyl Ether (EB). (CAS # 111-76-2).
Ethylene Glycol. CAS # 107-21-1

Groco 28 - Soya Fatty acid. (Stopped using in the 70s when company was sold and switched to Industrene 226.
Industrene 226 - Soya Fatty Acid. CAS # 671-08-0.
Isopropyl Alcohol. CAS # 67-63-0.
Monoethylamine CAS 75-04-7.
Mono Ethanolamine. CAS # 141-43-5.
N-Methyl Pyrrolidine. CAS # 872-50-4.
Ludox and Nyacol 1440. (Colloidial Silica solutions. Water soluable Anti-Slip Solutions used as anti-slip agents in Floor waxes. CAS # 7631-86-9.
Pamak 25A (Tall oil Fatty Acid). CAS # 8002-26-4.
Pine Oil. CAS # 8002-09-3.
Sodium Xylene Sulfonate (40%). CAS # 1300-72-7
Super Amide GR surfactant.
Tri-Ethanolamine 85%.CAS # 102-71-6.
Tri-Butoxy-Ethyl-Phosphate. (A plasticizer for floor finishes). CAS # 78-51-3.
Triton CF-10 surfactant.(Last purchased in'88.No CAS #.
Dyes from various sources.(Pound quantities)
Shellac and powdered resins for waxes and soaps.
Potash soap.

g. i. As a manufacturer of water based cleaning products, all chemicals manufactured on site were water soluable, therefore in all our cleaning procedures we used water only. In the event of "Build-up" soiling, prolonged water soaking removed all soil. Mechanical agitation was employed if needed.

g. i. 1. After kettle usage, all kettles were hosed down. The water was allowed to remain in the fill lines, and bottom of tank. Since this was a diluted form of product that we manufactured, we reused/recycled this residue. This diluted product was used as general cleaners for the company, soap for the washing out of "fat" drums, or in some cases sold as diluted form of our standard cleaners. Wax and finish kettles were drained completely with the same cleaning method as above. A trap was employed to collect wax residue, and cleaned as needed. Dried residue on kettles was removed.

ii. twenty gallons of water per month.

h. i. Very little spillage occurred during our manufacturing and/or filling operations. If any, drippings occurred from the filling. It was either mopped up or soaked up with paper towels or rags. Wet floor areas were allowed to dry for safe passage. Wet rags were dried and disposed of in our trash containers. Paper towels were also disposed of in our trash barrels. Trash was picked up weekly by either the City of Boston, or the City of

Chelsea. **See Spill Plan Exhibit 2.1**

1984 copy of authorization to discharge sewage into the MDC sewerage system through the Chelsea sewerage system enclosed for your information. ***See Exhibit 6***

ii. Water was the material to clean up spills, as all of our finished products were water soluble. In case of a minor spillage of fatty acids, which are not water soluble, the floor area was wiped clean with rags or paper towels, which were then disposed of in our regular trash, and mopped with our diluted cleaner we manufactured.

iii. Methods used for clean-up; paper towel blotting, absorbing rags blot ting, mop and bucket.

3. h. iv. Mopped up residue was treated the same as our floor cleaning residue and disposed of in the city sewer system. This residue was thoroughly diluted with water and did not present any hazards. Dried paper towels, or rags were disposed of in city trash collection

i. **Schematic flow chart Exhibit 3**

j. Carl Lamm, (dead), Bill Easton (dead), George L. Lamm, Joe Sampson (unknown), Frank Bassett, Peter Lamm (Dead), James Lamm **Exhibit 4**

4. a. **Waste Survey Exhibit 5**

b. The only waste generated by Lamco's manufacturing process during the timeframe (1950-1985) was a solid wax, not completely melted during the manufacturing process. This solid was captured by means of several strainers in the filling process, and a trap in the final cleaning process. Other spills were captured at the source, and absorbed with paper towels, or rags. Rags were washed and reused.

All finished products were put into drums, pails or jugs and generated no waste. Residue left on soap kettle walls were hosed down with water and reused (recycled) into next batch. Solid wax residues that clung to kettle walls after the manufacturing were physically collected and were disposed of in our regular trash. (Micro crystalline wax residue).
Massachusetts Industrial User Discharge Permit 11 000 612-1 **See Exhibit: 6**

iii. The approximate monthly volume of above residue, was less than one pound of wax and less than a gallon of soap residue from kettles.

iv. dates of waste production would have been whenever we manufactured. No data exists.

c. We did not collect or store any waste, except as noted in paragraph b. above, empty 55 gallon drums were stored in basement. Office and factory trash was stored in 55 gallon fiber drums, reused burlap wax bags, and plastic trash bags.

d. Carl Lamm, George Lamm
e. No such data exists as we never conducted surveys or studies.
f. George L. Lamm

5. a. Carl Lamm, (dead), Bill Easton (dead), George L. Lamm, Joe Sampson (unknown), Frank Bassett living in Perry, ME, Peter Lamm (Dead), James Lamm

b. Carl Lamm, (dead), Bill Easton (dead), George L. Lamm, Joe Sampson (unknown), Frank Bassett living in Perry, ME, Peter Lamm (Dead), James Lamm

c. George L. Lamm, James Lamm

d. 1. Carl Lamm
i. President
ii. Responsible for all company operations.
iii. *1949 to 1961*
iv. Board of Directors.
v. 1961
vi. Unknown.

d. 2. Bill Easton
i. Production Supervisor
ii. Responsible for production.
iii. 1949 to 1956
iv. Carl Lamm.
v. 1956
vi. Unknown.

d. 3. George Lamm
i. President 1961-1986
ii. Responsible for all company operations.
iii. 1953 to 2004
iv. Board of Directors.
v. *Retired, Manufacturing part time*
vi. Best Memory

d. 4. Joe Sampson

i. Production Supervisor
ii. Responsible for production.
iii. 1956 to 1961
iv. 1961.
v. Unknown
vi. No knowledge.

5. d. 5.Frank Bassett

i. Production Supervisor
ii. Responsible for production.
iii. 1957 to 1999
iv. George Lamm, James Lamm.
v. 1999
vi. Unknown.

d. 6. Peter Lamm

i. Production assistant
ii. Helped in all phases of company operations.
iii. 1969 to 1974
iv. George Lamm.
v. Dead
vi. Unknown.

e. The following answers is how Lamco Chemical Company disposed of it's factory trash.

i. 55 gallon fiber drums.

ii. The color of these containers was beige or blue.

iii. The containers had no special markings.

iv. Most likely marking on outside of drum as to type of product that had been in the drum.

v. used

vi. The fiber drums that we used to dispose of our trash were 55 gallon drums that we used internally to fill the contents of bulk deliveries of raw material products. Once these drums became damaged during use, they were washed out (as in the normal course of manufacturing) and then filled with trash, including paper towels, rags, and other factory waste.

f. No agreements or contracts were ever written, signed, or existed.

g. Not applicable.

5. h. Trash was collected by the City of Boston, and the City of Chelsea. Junk empty barrels were disposed of in several ways. Some were given away to companies that reused them for there own needs (local junk yards, motor company), others were returned to the drum company supplying us barrels at the time of delivery.

i. City of Boston, City of Chelsea, AGN Container Company, Uxbridge, MA. (Purchased both reconditioned and new drums), Chelsea Drum Company, Franklin, MA. John Clark Company, Cambridge, MA, Kingston Steel Drum Company, So. Kingston, NH, Ross Barrel, Somerville, MA, Woburn Steel Drum Company, Woburn, MA.(We purchased both new and reconditioned drums), Ryan Barrel, Malden, Massachusetts. As well as others.

j. We did not transport any waste from our premises.

k. City of Boston and City of Chelsea.

l. Once per week, our regular trash pick-up.

m. two to three 55 gallon fiber drums, burlap bags that had contained wax, or plastic bags filled with office waste and factory trash.

n. Picked up weekly.

o. None available.

p. Unknown.

q. Unknown.

r. No documents were ever issued.

s. We did not dispose of regulated or toxic waste nor any raw material concentrates, therefore all waste generated by Lamco was disposed of in the usual weekly trash pick up.

i. Did not inventory
ii. Did not request waste to be picked up
iii. City of Boston, City of Chelsea
iv No additional charge
v. George L. Lamm.

vi. George L. Lamm

5. t. None

u. To the best of our knowledge. As stated earlier, all records that may have been kept, were lost due to floods. No records exist.

v. George Lamm
Frank Bassett.

6. a.-g. For the period in question we have no RCRA Identification numbers, due to the fact that our manufacturing volume was too small and thus were never required to file the necessary reports. The only data we have on this subject, is an internal memo, dated February 1, 1978, Subject: Toxic Substance Control Act, Inventory reporting.
Exhibit: 7
Also a second internal memo on the above subject dated February 22, 1978.
Exhibit: 8

See EPA Disinfectant Reports Exhibit 9

7. This portion of the report was authored by George Lamm since he has first hand knowledge of these events.

To the best of my recollection, our first contact with Whitney Barrel was with Jack Whitney Sr., who was recommended to me by a company in Quincy Massachusetts with whom I had placed an order for the fabrication of a two part, eight hundred gallon stainless steel mixing kettle. Because of the tank's size, a specialist was needed to transport same and assist us in setting up and installing this tank in Boston. Jack Whitney Sr. performed this work in the early sixties. (I believe it was 1962, but am not exactly sure of the time or year).

In 1965, Jack Whitney Sr. once again assisted us in our move from 33 Commercial Wharf in Boston to our present location in Chelsea, Massachusetts, by dismantling and moving boilers, kettles, large motors and other equipment and by helping us to put these huge items into place. It was a "rigging" operation. Unfortunately after so many years and because of the Chelsea Fire of 1973 and severe storms of 1985, no documents are available. After our move to Chelsea we continued to do business with Whitney Barrel by purchasing various pieces of equipment. To the best of my recollection, Lamco purchased several one hundred gallon stainless steel mixing kettles, several electric mixing motors, motor mounts for these mixers, stainless steel shafts and mixing propellers, two stainless steel internal heating coils, suitable for high pressure steam, as well as a 250 gallon stainless steel storage tank. Jack Whitney Sr. also sold us and assisted with the installation of five very large stainless steel storage vessels, each with a 900

gallon capacity. (two compartments of 450 gallons each). These were set up in our basement and required extensive rigging.

The drum business we did with Whitney Barrel was very limited. Whitney Barrel was one of many drum reconditioners in a highly competitive market and we switched our drum suppliers often. Regarding any drums that might have been sent to Whitney Barrel they were extremely few in number. The usual practice among the trade required the collection of at least twenty-five dirty barrels before a company even considered to pick them up for reconditioning. Since we were never able to collect that many we arranged with any of the reconditioners from whom we ordered reconditioned drums to pick up whatever used drums we had on our premises, usually no more than one or two and they were given to these companies. Completely useless drums (for us), such as drums with punched in holes, after cleaning, were given to local junk dealers who cut the top off and used them to fill them with metal junk pieces.

Fiber drums were either used internally, given to our neighbor, The New England Electric Motor Company, both in our Boston (10 Commercial Wharf) as well as our Chelsea location (214 Arlington Street), or were used for our own disposal of trash and waste.

Regarding any possible residue that might have been contained in any of the drums that we gave to the drum reconditioners there was none. No raw material barrels were ever given to a reconditioner because these barrels were in very good condition and we could easily reuse them. In our manufacturing process, it was common practice to wash out the drum to remove any residue that remained to be added to the batch we were making. I must point out that our products were biodegradable and contained no harmful chemicals. As a result, the minor content of any of these drums could never contribute to a hazardous site, since they were harmless and friendly to the environment. It should also be noted, that other then the possible purchasing of the equipment and items referred to above, we stopped all purchases with Whitney Barrel, shortly after Jack Whitney Sr.'s death in 1972.

Lamco Chemical Company utilized many barrel companies during the time period under investigation. They include AGN Container Company, Uxbridge, MA. (Purchased both reconditioned and new drums), Chelsea Drum Company, Franklin, MA. John Clark Company, Cambridge, MA, Kingston Steel Drum Company, So. Kingston, NH, Ross Barrel, Somerville, MA, Woburn Steel Drum Company, Woburn, MA.(We purchased both new and reconditioned drums), Ryan Barrel, Malden, Massachusetts. Reliable Steel Drum, Milford CT, and Independent Packaging, Waltham, MA. As well as others.

The following answers are given as a guide line of our usual business practice. Any drum business that we may or may not have done with Whitney Barrel is undocumented by us. As stated above, we used many suppliers, Whitney may have been one, but they were definitely not a major supplier. Our best guess for purchases from

barrel companies would be two - three times per year from any one of the suppliers listed above. The usual number of barrels ordered was 25, and Lamco always ordered the minimums.

7. a. Our business with Whitney Barrel was the purchasing of tanks, motors, rigging, and very little barrel business from 1965 – 1972 as described more fully above.

b. i. If we used Whitney Barrel Company, they would have delivered their drums to Lamco. We did not have company trucks. We do not have any records of any purchases from Whitney Barrel Company that we could document.

ii. Lamco purchased from recyclers, closed head metal drums.

iii. The sizes used were fifty-five and thirty gallon drums.

iv. All used containers purchased from any source were received clean, painted and ready to be filled, or they would have been returned to the company.

v. All drums received from re-conditioners were clean inside and free from any residue, or otherwise would have been returned.

vi. No documentation available.

c. Absolute no

d. i. We never sold, sent out to be cleaned or reconditioned any barrel. Any supplier we used was given the "junk" drum, or the drums we could not clean on our own, useless to us.

ii. Lamco purchased from recyclers, closed head metal drums.

iii. The sizes used were fifty-five and thirty gallon drums.

iv. All used containers purchased from any source were received clean, painted and ready to be filled, or they would have been returned to the company.

v. 1. It was our company policy to wash out all recycled Lamco finished product drums before filling. All raw material drums were used as is per our comp ability factor. If after washing, the drum was damaged, we would try to repair the damage so we could use it. If we could not repair it, or there were obvious physical defect, is was marked "junk" and given

away to the many local junk yards, or sent back to a recycler. There were three classes of returned drums that any reconditioner received from Lamco.

7. v.1. The first class of returned drum was a drum that we could not clean effectively by our methods. These drums are in two categories. First, those that contained finished products manufactured by Lamco Chemical Company that had been stored for several months by our customers without the bungs sealing the container. As a result of this action, the product that was in the drum solidified.

The second type and only type of drum that was returned because it was very difficult to remove the residue from the drum, and the raw residue was not compatible with our finished products. That product was tall oil fatty acid (CAS #8002-26-4 No Hazardous ingredients as outlined under section II of the MSDS)

The second class of drum returned to a drum reconditioner was a "defective drum". This included lined barrels that had lining failure, rusty insides, dented, crushed, cut, punctured, or any defect that did not allow us to utilize the drum ourselves. These drums did not contain any residue. (Lined drums had to be cleaned to determine if the lining was defective, drums that had holes in them were done by customers to drain the 100% of the contents, or to remove rainwater when drums were stored outside.) These drums were also picked up by the many local scrap yards that surrounded our company prior to the Chelsea fire in 1973.

The third class of returned drum to a reconditioner was an unusable drum for the purpose of sending out finished product to our customers. These drums included all open head barrels. These barrels were used internally by Lamco for the repackaging of bulk solutions that we received. After many uses, some of these drums became defective.

Our best guess would be 4 drums per year. The previous product stored in these drums was Soya Fatty Acid (CAS # 67701-08-0 No Hazardous ingredients as outlined under section II of the MSDS). These drums were cleaned before they were determined to be defective.

v. (a.)1. Soya Fatty AcidCAS # 67701-08-0 No Hazardous ingredients as outlined under section II of the MSDS)
(a.)2. Tall oil fatty acid CAS #8002-26-4 No Hazardous ingredients as outlined under section II of the MSDS
(a.)3. Lamco manufactured floor waxes No Hazardous ingredients as outlined under section II of the MSDS)

At no time did any drums returned to a recycler contained any raw materials, or hazardous materials as outline on enclosure F.

7. v. b. Fatty Acid

c. Drum was empty, the product was a liquid.

d. Drum was empty, the product in barrel was turned upside down, and allowed to drain before it was given to any recycler.

vi. No documentation exists.

Once again, no documents are available and the amount of these drums turned over to Whitney Barrel and other reconditioning companies, were no more then about ten to twelve drums per year.

e1. i. Transportation and set-up of a two part, eight hundred gallon stainless steel mixing kettle.

ii. Once

iii. +/- 1962

iv. No documentation exists.

e2. i. Rigging and moving the heavy equipment from 33 Commercial Wharf Boston, MA to 212 Arlington Street Chelsea,MA .

ii. Once

iii. +/- 1965

iv. No documentation exists.

7. e3. i. Sold and installed five 900 gallon tanks.

ii. Once

iii. +/- 1970

iv. No documentation exists.

e. Over the years, we purchased several other mixing motors, shafts, heating coils, and other related supplies for our company. See the opening statement for answer # 7 on page ten.

7. f. No.

g. Not applicable.

h. Not applicable.

i. Not applicable.

8. a. We have no knowledge about others regarding Whitney Barrel.

b. none

c. none

9. a. i. George L. Lamm, James G. Lamm

ii. James G. Lamm President,
George Lamm retired, working part time manufacturing.

iii. George Lamm factory worker to president
James Lamm sales

iv. No past employees were contacted.

v. All records were reviewed, we have no divisions or other branches.

vi. Old formulas, information contained in MSDS sheets, telephone records, purchasing records, receiving records, manufacturing records.

vii. Location of documents is on second floor of 212 Arlington Street.

viii. Same.

WELLS G & H

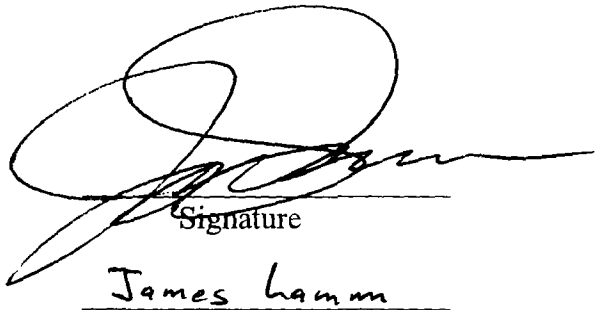
ENCLOSURE H - DECLARATION

I declare under penalty of perjury that I am authorized to

respond on behalf of _____ and that the
Respondent

foregoing is complete, true, and correct.

Executed on _____, 2__



Signature

James Lamm

Type Name

President

Title [if any]

EHIBIT "A"

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

HAZARD RATING
4-EXTREME
3-HIGH
2-MODERATE
1-SLIGHT
0-INSIGNIFICANT
*-SEE SECTION VI

tabbies

EXHIBIT A(1)

IDENTITY (As Used on Label and List) "INSTANT GLOSS" (Floor Finish)

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name: LAHCO CHEMICAL CO. INC.,	Emergency Telephone Number: (617) 884-8470*
Address (Number, Street, City, State, and ZIP Code): 212 Arlington Street, CHELSEA, MA 02150	Telephone Number for Information: * OR LOCAL POISON CENTER
	Date Prepared: May 9, 1990
	Signature of Preparer (optional): [signature]

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
COMPONENTS OF THIS PODUCT ARE NOT CLASSIFIED HAZARDOUS BY NATURE OR CONCENTRATION.				

Section III — Physical/Chemical Characteristics

Boiling Point	212° F	Specific Gravity (H_2O = 1)	1.02
Vapor Pressure (mm Hg.)	ca. water	Melting Point	N.A.
Vapor Density (AIR = 1)	ca. water	Evaporation Rate (Butyl Acetate = 1)	slower than ether
Solubility in Water	complete		
Appearance and Odor	Milky white liquid - mild acrylic odor		pH 8 - 9

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used) TCC - None to boiling 210°F+	Flammable Limits: None determined	LEL: N.A.	UEL: N.A.
Extinguishing Media: Water			
Special Fire Fighting Procedures: None			
Unusual Fire and Explosion Hazards: Material can splatter above 100°C/212°F. Polymer film can burn.			

Disclaimer of Liability

As conditions or methods of use are beyond our control, we do not assume any responsibilities and expressly disclaim any liability for use of the material. The information contained herein is based on the data available to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

(Reproduce locally)

OSHA 174, Sept 1985
modified

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Do not mix with anything but water
Incompatibility (*Materials to Avoid*)			Concentrated or strong oxidizing agents
Hazardous Decomposition or Byproducts			None known
Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	N.A.

Section VI — Health Hazard Data

Route(s) of Entry	Inhalation?	X	Skin?	X	Ingestion? X
Health Hazards (*Acute and Chronic*)	Acute: May cause nausea or headache in rare cases.				
	Chronic: No chronic data presently available.				
Carcinogenicity	NTP? No		IARC Monographs? No		OSHA Regulated? No
Signs and Symptoms of Exposure	Could cause nausea and/or headache in rare cases. If splashed into eyes would cause eye irritation. Could be irritating to skin upon repeated and prolonged contact.				
Medical Conditions Generally Aggravated by Exposure	None known				
Emergency and First Aid Procedures	INHALATION: Move subject to fresh air. EYE and SKIN contact: Flush eyes with large amounts of water for at least 15 minutes. If irritation persists ge medical attention. Skin: wash affected areas with soap and water. INGESTION: Administe water or milk to dilute. GET IMMEDIATE MEDICAL ATTENTION.				

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled: Keep spectators away, floor may be slippery. SMALL SPILLS: Mop up or wet vacuum; let area dry. LARGE SPILLS: Dike and contain with inert material (sa earth, etc.) and transfer to separate containers for disposal.

Waste Disposal Method: Comply with all local, state and federal regulations. If local ordinanc allow sewer disposal, dilute material with large amounts of water prior to disposal. Otherwi collect the product with the aid of inert material and dispose of in approved sites or landfi

Precautions to Be Taken in Handling and Storing (*and/or* Other Precautions)

Keep containers closed when not in use. KEEP OUT OF REACH OF CHILDREN

Section VIII — Control Measures

Respiratory Protection (*Specify Type*): None required if good and normal ventilation is maintained.

Ventilation	Local Exhaust N.A.	Special	N.A.
	Mechanical (*General*) Adaquate	Other	N.A.
Protective Gloves	Normally not required	Eye Protection	recommended

Other Protective Clothing or Equipment: Normally not needed

Work/Hygienic Practices: Good housekeeping practices apply.

EHIBIT "A"

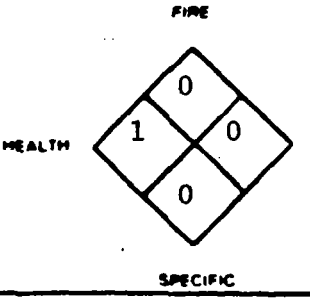
2

NFPA Designation 704

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

HAZARD RATING
4 = EXTREME
3 = HIGH
2 = MODERATE
1 = SLIGHT
0 = INSIGNIFICANT



SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL COMPANY, INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS aqueous floor finish emulsion	TRADE NAME AND SYNONYMS Lamco Super Gloss
CHEMICAL FAMILY anionic emulsion	FORMULA

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Diethylene Glycol Methyl Ether CAS #111-77-3	4.25	not established

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	212	SPECIFIC GRAVITY (H_2O=1)	1.022
VAPOR PRESSURE (mm Hg.)	water	PERCENT, VOLATILE BY VOLUME (%)	81.5
VAPOR DENSITY (AIR=1)	water	EVAPORATION RATE (_____ =1)	slower than ether
SOLUBILITY IN WATER	complete		9.1
APPEARANCE AND ODOR	Milky white liquid -- odor pleasant.		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) Tag Closed Cup none to boiling point 200° F.	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA			
SPECIAL FIRE FIGHTING PROCEDURES no special requirements			
UNUSUAL FIRE AND EXPLOSION HAZARDS			

(Continued on reverse side)

0031-0030

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
See Section II

EFFECTS OF OVEREXPOSURE
Eyes: Direct contact may cause irritation.

EMERGENCY AND FIRST AID PROCEDURES
Eyes: Flush with water. If irritation persists, call physician. Ingestion: Induce vomiting, get medical attention.

SECTION VI - REACTIVITY DATA

STABILITY	**UNSTABLE**		**CONDITIONS TO AVOID**
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	**MAY OCCUR**		**CONDITIONS TO AVOID**
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Dike and absorb spill with inert material (sand, sawdust) and transfer to containers for discard, if not able to mop up initially.

WASTE DISPOSAL METHOD
If material is diluted with water, flush to sewer if local ordinance permits. Otherwise use sanitary land fill approved by local, state and federal authorities as a disposal site.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*

VENTILATION	**LOCAL EXHAUST**	**SPECIAL**
	MECHANICAL *(General)*	**OTHER**

PROTECTIVE GLOVES	**EYE PROTECTION**

OTHER PROTECTIVE EQUIPMENT
no special requirements

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
none

OTHER PRECAUTIONS

EHIBIT "A" 3

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No 1218-0072

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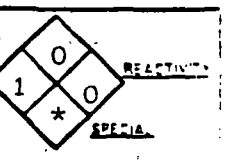

IDENTITY *(As Used on Label and List)*
LAMCO "LLL" (Triple "L") FLOOR FINISH

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that

Section I

Manufacturer's Name: LAMCO CHEMICAL COMPANY, INC.,	Emergency Telephone Number: (617) 884-8470
Address *(Number, Street, City, State, and ZIP Code)*	Telephone Number for Information: (617) 884-8470
212 Arlington Street	Date Prepared: June 29, 1987
CHELSEA, MA 02150	Signature of Preparer *(optional)*: George A. Cleaves

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% *(optional)*
COMPONENTS NOT CLASSIFIED HAZARDOUS BY NATURE OR CONCENTRATION				

Section III — Physical/Chemical Characteristics

Boiling Point	212° F	Specific Gravity (H_2O = 1)	1.04
Vapor Pressure (mm Hg.)	ca. water	Melting Point	N.A.
Vapor Density (AIR = 1)	ca. water	Evaporation Rate (Butyl Acetate = 1)	slower than ether
Solubility in Water	complete		
Appearance and Odor	Milky white liquid - mild acrylic odor		pH 8 - 9

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used) TCC - None to boiling 210°F+	Flammable Limits: None determined	LEL: N.A.	UEL: N.A.
Extinguishing Media: Water			
Special Fire Fighting Procedures: None			
Unusual Fire and Explosion Hazards: Material can splatter above 100°C/212°F. Polymer film can burn.			

Disclaimer of Liability
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OSHA 174, Sept. 1985
modified

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Do not mix with anything but water

Incompatibility (*Materials to Avoid*) Concentrated or strong oxidizing agents

Hazardous Decomposition or Byproducts None known

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	N.A.

Section VI — Health Hazard Data

Route(s) of Entry Inhalation? X Skin? X Ingestion? X

Health Hazards (*Acute and Chronic*) Acute: May cause nausea or headache in rare cases.

Chronic: No chronic data presently available.

Carcinogenicity NTP? No IARC Monographs? No OSHA Regulated? No

Signs and Symptoms of Exposure Could cause nausea and/or headache in rare cases. If splashed into eyes would cause eye irritation. Could be irritating to skin upon repeated and prolonged contact.

Medical Conditions Generally Aggravated by Exposure None known

Emergency and First Aid Procedures INHALATION: Move subject to fresh air. EYE and SKIN contact: Flush eyes with large amounts of water for at least 15 minutes. If irritation persists get medical attention. Skin: wash affected areas with soap and water. INGESTION: Administer water or milk to dilute. GET IMMEDIATE MEDICAL ATTENTION.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled Keep spectators away, floor may be slippery. SMALL SPILLS: Mop up or wet vacuum; let area dry. LARGE SPILLS: Dike and contain with inert material (sand, earth, etc.) and transfer to separate containers for disposal.

Waste Disposal Method Comply with all local, state and federal regulations. If local ordinances allow sewer disposal, dilute material with large amounts of water prior to disposal. Otherwise collect the product with the aid of inert material and dispose of in approved sites or landfill.

Precautions to Be Taken in Handling and Storing (and/or Other Precautions)

Keep containers closed when not in use. KEEP OUT OF REACH OF CHILDREN

Section VIII — Control Measures

Respiratory Protection (*Specify Type*) None required if good and normal ventilation is maintained.

Ventilation	Local Exhaust N.A.	Special N.A.
	Mechanical (*General*) Adaquate	Other N.A.

Protective Gloves Normally not required Eye Protection recommended

Other Protective Clothing or Equipment Normally not needed

Work/Hygienic Practices Good housekeeping practices apply.

• USGPO 1984-491-529/5775

EHIBIT "A"

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No 1218-0072

HAZARD RATING
4=EXTREME
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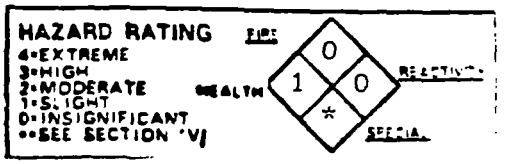
**=SEE SECTION VI



IDENTITY (As Used on Label and List)	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.
LAMCO "LLL" SPRAY BUFF SOLUTION	

Section I

Manufacturer's Name: LAMCO CHEMICAL COMPANY, INC.,	Emergency Telephone Number: (617) 884-8470
Address (Number, Street, City, State, and ZIP Code)	Telephone Number for Information: (617) 884-8470
212 Arlington Street	Date Prepared: June 29, 1987
CHELSEA, MA 02150	Signature of Preparer (optional): George A. Cram

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
COMPONENTS NOT CLASSIFIED HAZARDOUS BY NATURE OR CONCENTRATION				

Section III — Physical/Chemical Characteristics

Boiling Point	212° F	Specific Gravity (H_2O = 1)	1.01
Vapor Pressure (mm Hg.)	ca. water	Melting Point	N.A.
Vapor Density (AIR = 1)	ca. water	Evaporation Rate (Butyl Acetate = 1)	slower than ether
Solubility in Water	complete		
Appearance and Odor	Milky white liquid - mild acrylic odor		pH 8 - 9

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used) TCC - None to boiling 210°F+	Flammable Limits: None determined	LEL: N.A.	UEL: N.A.
Extinguishing Media: Water			
Special Fire Fighting Procedures: None			
Unusual Fire and Explosion Hazards: Material can splatter above 100°C/212°F. Polymer film can burn.			

Disclaimer of Liability

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Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Do not mix with anything but water.

Incompatibility (*Materials to Avoid*): Concentrated or strong oxidizing agents.

Hazardous Decomposition or Byproducts: None known

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	N.A.

Section VI — Health Hazard Data

Route(s) of Entry: Inhalation? X Skin? X Ingestion? X

Health Hazards (*Acute and Chronic*): Acute: May cause nausea or headache in rare cases.

Chronic: No chronic data presently available.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Signs and Symptoms of Exposure: Could cause nausea and/or headache in rare cases. If splashed into eyes would cause eye irritation. Could be irritating to skin upon repeated and prolonged contact.

Medical Conditions Generally Aggravated by Exposure: None known

Emergency and First Aid Procedures: INHALATION: Move subject to fresh air. EYE and SKIN contact: Flush eyes with large amounts of water for at least 15 minutes. If irritation persists get medical attention. Skin: wash affected areas with soap and water. INGESTION: Administer water or milk to dilute. GET IMMEDIATE MEDICAL ATTENTION.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled: Keep spectators away, floor may be slippery. SMALL SPILLS: Mop up or wet vacuum; let area dry. LARGE SPILLS: Dike and contain with inert material (sand, earth, etc.) and transfer to separate containers for disposal.

Waste Disposal Method: Comply with all local, state and federal regulations. If local ordinances allow sewer disposal, dilute material with large amounts of water prior to disposal. Otherwise collect the product with the aid of inert material and dispose of in approved sites or landfill.

Precautions to Be Taken in Handling and Storing (and/or Other Precautions)

Keep containers closed when not in use. KEEP OUT OF REACH OF CHILDREN

Section VIII — Control Measures

Respiratory Protection (*Specify Type*): None required if good and normal ventilation is maintained.

Ventilation	Local Exhaust: N.A.	Special: N.A.
	Mechanical (*General*): Adaquate	Other: N.A.
Protective Gloves: Normally not required		Eye Protection: recommended

Other Protective Clothing or Equipment: Normally not needed

Work/Hygienic Practices: Good housekeeping practices apply.

• USGPO 1984-491-529/5775

EHIBIT "A"

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Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
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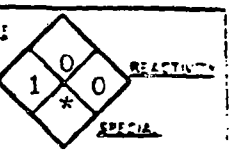

IDENTITY *(As Used on Label and List)*: LAMCO SCHOOL BRAND (Floor Wax)

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name: LAMCO CHEMICAL CO. INC.,	Emergency Telephone Number: (617) 884-8470 **
Address *(Number, Street, City, State, and ZIP Code)*: 212 Arlington Street	Telephone Number for Information: Same ** or local Poison Center
CHELSEA, MA 02150	Date Prepared: July 21, 1987
	Signature of Preparer *(optional)*:

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% *(optional)*
Components not classified hazardous by nature or concentration				

Section III — Physical/Chemical Characteristics

Boiling Point	212 ° F	Specific Gravity (H_2O = 1)	1.015
Vapor Pressure (mm Hg)	ca. water	Melting Point	N.A.
Vapor Density (AIR = 1)	ca. water	Evaporation Rate (Butyl Acetate = 1)	slower than ether

Solubility in Water: Complete

Appearance and Odor: Tan liquid — Non descriptive odor — pH 7.8 - 9.5

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
TCC. None to boiling 200 ° F plus.	none determined	N.A.	N.A.

Extinguishing Media: Water

Special Fire Fighting Procedures: none

Unusual Fire and Explosion Hazards

Material can splatter above 100° C/212° F. Wax film can burn.

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Section V -- Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Do not mix with anything but water

Incompatibility (*Materials to Avoid*) Concentrated or strong oxidizing agents

Hazardous Decomposition or Byproducts None known

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	N.A.

Section VI — Health Hazard Data

Route(s) of Entry Inhalation? X Skin? X Ingestion? X

Health Hazards (*Acute and Chronic*) Acute: May cause nausea or headache in rare cases.

Chronic: No chronic data presently available.

Carcinogenicity NTP? No IARC Monographs? No OSHA Regulated? No

Signs and Symptoms of Exposure Could cause nausea and/or headache in rare cases. If splashed into eyes would cause eye irritation. Could be irritating to skin upon repeated and prolonged contact.

Medical Conditions Generally Aggravated by Exposure None known

Emergency and First Aid Procedures INHALATION: Move subject to fresh air. EYE and SKIN contact: Flush eyes with large amounts of water for at least 15 minutes. If irritation persists get medical attention. Skin: wash affected areas with soap and water. INGESTION: Administer water or milk to dilute. GET IMMEDIATE MEDICAL ATTENTION.

Section VII — Precautions for Safe Handling and Use

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Waste Disposal Method Comply with all local, state and federal regulations. If local ordinances allow sewer disposal, dilute material with large amounts of water prior to disposal. Otherwise collect the product with the aid of inert material and dispose of in approved sites or landfill.

Precautions to Be Taken in Handling and Storing (and/or Other Precautions)

Keep containers closed when not in use. KEEP OUT OF REACH OF CHILDREN

Section VIII — Control Measures

Respiratory Protection (*Specify Type*) None required if good and normal ventilation is maintained.

Ventilation	Local Exhaust N.A.	Special N.A.
	Mechanical (General) Adaquate	Other N.A.

Protective Gloves Normally not required Eye Protection recommended

Other Protective Clothing or Equipment Normally not needed

Work/Hygienic Practices Good housekeeping practices apply.

EHIBIT "A"

6

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200 Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No 1218-0072

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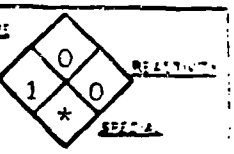

IDENTITY (As Used on Label and List)	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.
LAMCO "#884" FLOOR FINISH	

Section I

Manufacturer's Name: LAMCO CHEMICAL COMPANY, INC.,	Emergency Telephone Number: (617) 884-8470
Address (Number, Street, City, State, and ZIP Code)	Telephone Number for Information: (617) 884-8470
212 Arlington Street	Date Prepared: June 25, 1987
CHELSEA, MA 02150	Signature of Preparer (optional): George G. Cram

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
COMPONENTS NOT CLASSIFIED HAZARDOUS BY NATURE OR CONCENTRATION				

Section III — Physical/Chemical Characteristics

Boiling Point	212° F	Specific Gravity (H_2O = 1)	1.02
Vapor Pressure (mm Hg)	ca. water	Melting Point	N.A.
Vapor Density (AIR = 1)	ca. water	Evaporation Rate (Butyl Acetate = 1)	slower than ether
Solubility in Water	complete		
Appearance and Odor	Milky white liquid - mild acrylic odor		pH 8 - 9

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	TCC - None to boiling 210°F+	Flammable Limits: None determined	LEL: N.A.	UEL: N.A.
Extinguishing Media	Water			
Special Fire Fighting Procedures	None			
Unusual Fire and Explosion Hazards	Material can splatter above 100°C/212°F. Polymer film can burn.			

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(Reproduce locally)

OSHA 174, Sept. 1985
modified

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Do not mix with anything but water

Incompatibility (*Materials to Avoid*): Concentrated or strong oxidizing agents

Hazardous Decomposition or Byproducts: None known

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	N.A.

Section VI — Health Hazard Data

Route(s) of Entry: Inhalation? X Skin? X Ingestion? X

Health Hazards (*Acute and Chronic*): Acute: May cause nausea or headache in rare cases.

Chronic: No chronic data presently available.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Signs and Symptoms of Exposure: Could cause nausea and/or headache in rare cases. If splashed into eyes would cause eye irritation. Could be irritating to skin upon repeated and prolonged contact.

Medical Conditions Generally Aggravated by Exposure: None known

Emergency and First Aid Procedures: INHALATION: Move subject to fresh air. EYE and SKIN contact: Flush eyes with large amounts of water for at least 15 minutes. If irritation persists get medical attention. Skin: wash affected areas with soap and water. INGESTION: Administer water or milk to dilute. GET IMMEDIATE MEDICAL ATTENTION.

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Precautions to Be Taken in Handling and Storing (*and/or* Other Precautions)

Keep containers closed when not in use. KEEP OUT OF REACH OF CHILDREN

Section VIII — Control Measures

Respiratory Protection (*Specify Type*): None required if good and normal ventilation is maintained.

Ventilation	Local Exhaust: N.A.	Special: N.A.
	Mechanical (*General*): Adaquate	Other: N.A.

Protective Gloves: Normally not required

Eye Protection: recommended

Other Protective Clothing or Equipment: Normally not needed

Work/Hygienic Practices: Good housekeeping practices apply.

• USGPO 1984-491-529/45775

EHIBIT "A"

SEP 7 1984

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

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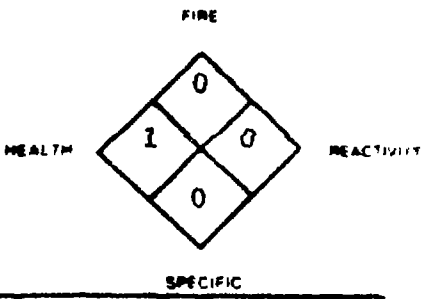

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL CO., INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS aqueous floor finish - emulsion	TRADE NAME AND SYNONYMS Lamco Buffable Floor Finish
CHEMICAL FAMILY	FORMULA

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Does not contain hazardous substances in reportable quantities.		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.) (water)	212	SPECIFIC GRAVITY (H_2O=1)	1.020
VAPOR PRESSURE (mm Hg.)	N.A.	PERCENT, VOLATILE BY VOLUME (%)	83.5
VAPOR DENSITY (AIR=1)	N.A.	EVAPORATION RATE (_____ =1)	slower than ether
SOLUBILITY IN WATER	complete	pH	8.6
APPEARANCE AND ODOR	Milky white liquid. Odor: pleasant		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) Tag Closed Cup none to boiling point 200° F. +	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA water			
SPECIAL FIRE FIGHTING PROCEDURES none			
UNUSUAL FIRE AND EXPLOSION HAZARDS none			

(Continued on reverse side)

EHIBIT "A"

8

SEP 7 1984

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

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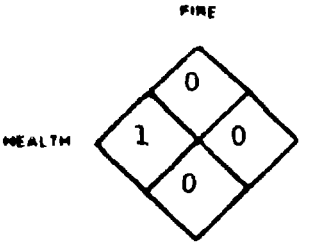

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL CO., INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS Aqueous Floor Finish Emulsion	TRADE NAME AND SYNONYMS Formula 813/18 Floor Finish
CHEMICAL FAMILY Anionic Emulsion	FORMULA

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Diethylene Glycol Methyl Ether CAS #111-77-3	4.25	not established

SECTION III - PHYSICAL DATA

BOILING POINT (°F.) (water)	212	SPECIFIC GRAVITY (H_2O=1)	1.022
VAPOR PRESSURE (mm Hg.)	water	PERCENT, VOLATILE BY VOLUME (%)	81.5
VAPOR DENSITY (AIR=1)	water	EVAPORATION RATE (_____ =1)	slower than ether
SOLUBILITY IN WATER	complete	pH	9.1
APPEARANCE AND ODOR	Milky white liquid -- odor pleasant.		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) Tag Closed Cup	FLAMMABLE LIMITS	Lel	Uel
None to boiling point 200° F. +			
EXTINGUISHING MEDIA			
SPECIAL FIRE FIGHTING PROCEDURES No special requirements.			
UNUSUAL FIRE AND EXPLOSION HAZARDS			

(Continued on reverse side)

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SEP 7 1984

NFPA Designation 704

FIRE 0 / HEALTH 1 / REACTIVITY 0 / SPECIFIC

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

HAZARD RATING
4 = EXTREME
3 = HIGH
2 = MODERATE
1 = SLIGHT
0 = INSIGNIFICANT

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL COMPANY, INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS Lamco Deluxe Floor Wax
CHEMICAL FAMILY	FORMULA

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Does not contain hazardous substances in reportable quantities.		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.) water	212	SPECIFIC GRAVITY (H_2O=1)	1.014
VAPOR PRESSURE (mm Hg.)	water	PERCENT, VOLATILE BY VOLUME (%)	86
VAPOR DENSITY (AIR=1)	water	EVAPORATION RATE (_____ =1)	slower than ether
SOLUBILITY IN WATER	complete	pH	9
APPEARANCE AND ODOR Color: tan		Odor: mild	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) Tag Closed Cup none to boiling point 200° F. +	FLAMMABLE LIMITS	Lel	Uel

EXTINGUISHING MEDIA
water

SPECIAL FIRE FIGHTING PROCEDURES
none

UNUSUAL FIRE AND EXPLOSION HAZARDS
none

(Continued on reverse side)

EHIBIT "A"

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U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

HAZARD RATING
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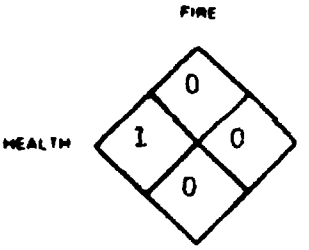

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL CO., INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS Aqueous Floor Finish Emulsion	TRADE NAME AND SYNONYMS Lamco High Gloss Masterpiece
CHEMICAL FAMILY Anionic Emulsion	FORMULA

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Diethylene Glycol Methyl Ether CAS #111-77-3	5.4	not established

SECTION III - PHYSICAL DATA

BOILING POINT (°F.) (water)	212	SPECIFIC GRAVITY (H_2O=1)	1.030
VAPOR PRESSURE (mm Hg.)	water	PERCENT, VOLATILE BY VOLUME (%)	76
VAPOR DENSITY (AIR=1)	water	EVAPORATION RATE (_____ =1)	slower than ether
SOLUBILITY IN WATER	complete	pH	9.2
APPEARANCE AND ODOR	Milky white liquid -- odor pleasant.		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) Tag Closed Cup	FLAMMABLE LIMITS	Lel	Uel
None to boiling point 200° F. +			
EXTINGUISHING MEDIA			
SPECIAL FIRE FIGHTING PROCEDURES No special requirements.			
UNUSUAL FIRE AND EXPLOSION HAZARDS			

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EHIBIT "A"

SEP 1 2 1984

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

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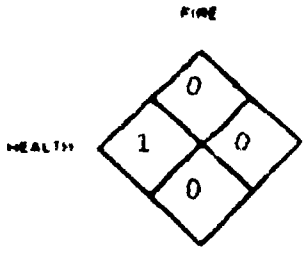

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL COMPANY, INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS Lamco Extra Heavy Duty
CHEMICAL FAMILY	FORMULA Industrial Floor Wax

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Does not contain hazardous substances in reportable quantities.		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.) water	212	SPECIFIC GRAVITY (H_2O=1)	1.02
VAPOR PRESSURE (mm Hg.)	water	PERCENT, VOLATILE BY VOLUME (%)	86
VAPOR DENSITY (AIR=1)	water	EVAPORATION RATE (_____ =1) slower than ether	
SOLUBILITY IN WATER	complete	pH	9.4
APPEARANCE AND ODOR Color: tan		Odor: mild	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) Tag Closed Cup	FLAMMABLE LIMITS	Lel	Uel
none to boiling point 200° F. +			

EXTINGUISHING MEDIA
water

SPECIAL FIRE FIGHTING PROCEDURES
none

UNUSUAL FIRE AND EXPLOSION HAZARDS
none

(Continued on reverse side)

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U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

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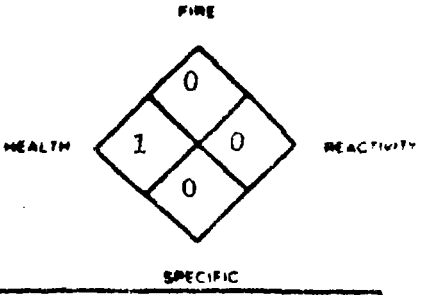

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL COMPANY, INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS Lamco Superior Floor Wax
CHEMICAL FAMILY	FORMULA

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Does not contain hazardous substances in reportable quantities.		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.) water	212	SPECIFIC GRAVITY (H_2O=1)	1.02
VAPOR PRESSURE (mm Hg.)	water	PERCENT, VOLATILE BY VOLUME (%)	86
VAPOR DENSITY (AIR=1)	water	EVAPORATION RATE (_____ =1) slower than ether	
SOLUBILITY IN WATER	complete	pH	9.4
APPEARANCE AND ODOR Color: tan		Odor: mild	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) Tag Closed Cup none to boiling point 200° F. +	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA water			
SPECIAL FIRE FIGHTING PROCEDURES none			
UNUSUAL FIRE AND EXPLOSION HAZARDS none			

(Continued on reverse side)

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U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

HAZARD RATING
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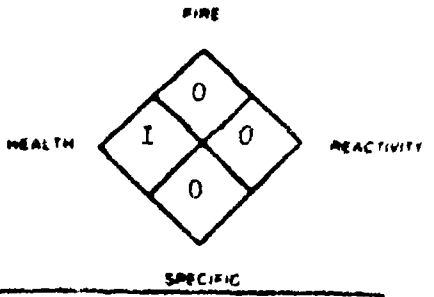

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL COMPANY, INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS Lamco Red Label Institutional
CHEMICAL FAMILY	FORMULA Floor Wax

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Does not contain hazardous substances in reportable quantities.		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.) water	212	SPECIFIC GRAVITY (H_2O=1)	1.016
VAPOR PRESSURE (mm Hg.)	water	PERCENT, VOLATILE BY VOLUME (%)	86
VAPOR DENSITY (AIR=1)	water	EVAPORATION RATE (_____ =1)	slower than ether
SOLUBILITY IN WATER	complete	pH	9.2
APPEARANCE AND ODOR	Color: tan	Odor: mild	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) Tag Closed Cup none to boiling point 200° F. +	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA water			
SPECIAL FIRE FIGHTING PROCEDURES none			
UNUSUAL FIRE AND EXPLOSION HAZARDS none			

(Continued on reverse side)

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NFPA Designation 704

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

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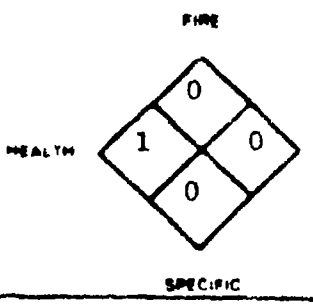

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL COMPANY, INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS #449 Floor Wax
CHEMICAL FAMILY	FORMULA

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Does not contain hazardous substances in reportable quantities.		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.) water	212	SPECIFIC GRAVITY (H_2O=1)	1.014
VAPOR PRESSURE (mm Hg.)	water	PERCENT, VOLATILE BY VOLUME (%)	86
VAPOR DENSITY (AIR=1)	water	EVAPORATION RATE (_____=1)	slower than ether
SOLUBILITY IN WATER	complete	pH	9
APPEARANCE AND ODOR	Color: tan	Odor: mild	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) Tag Closed Cup	FLAMMABLE LIMITS	LEL	UEL
none to boiling point 200° F. +			

EXTINGUISHING MEDIA
water

SPECIAL FIRE FIGHTING PROCEDURES
none

UNUSUAL FIRE AND EXPLOSION HAZARDS
none

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U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

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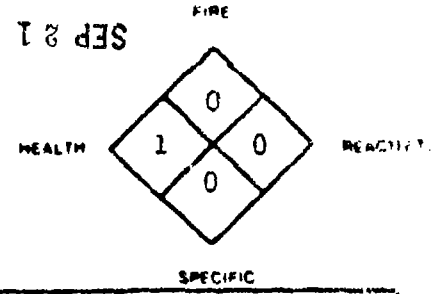

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL COMPANY, INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS Basic Wax
CHEMICAL FAMILY	FORMULA

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Does not contain hazardous substances in reportable quantities.		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.) (water)	212° F.	SPECIFIC GRAVITY (H_2O=1)	0.990
VAPOR PRESSURE (mm Hg.)	water	PERCENT, VOLATILE BY VOLUME (%)	76
VAPOR DENSITY (AIR=1)	water	EVAPORATION RATE (_____ =1)	slower than ether
SOLUBILITY IN WATER	complete	pH	8.2
APPEARANCE AND ODOR	Amber color -- distinctive wax emulsion odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) Tag Closed Cup none to boiling point 200° F.	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA water			
SPECIAL FIRE FIGHTING PROCEDURES none			
UNUSUAL FIRE AND EXPLOSION HAZARDS none			

(Continued on reverse side)

0031-0048

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U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

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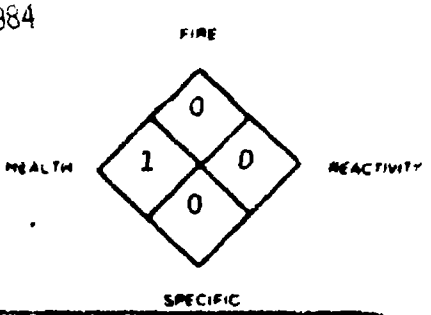

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL COMPANY, INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS potassium soap	TRADE NAME AND SYNONYMS Pine Scrub Soap
CHEMICAL FAMILY anionic	FORMULA

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Isopropyl Alcohol CAS #67-63-0	1	400 ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	N.A.	SPECIFIC GRAVITY (H_2O=1)	1.005
VAPOR PRESSURE (mm Hg.)	N.A.	PERCENT, VOLATILE BY VOLUME (%)	86.5
VAPOR DENSITY (AIR=1)	N.A.	EVAPORATION RATE (_____ =1)	slower than ether
SOLUBILITY IN WATER	complete	pH	11.4
APPEARANCE AND ODOR	Color: amber	Odor: pleasant - slight pine	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) Tag Closed Cup	FLAMMABLE LIMITS	Lel	Uel
none to boiling point 200° F. +			

EXTINGUISHING MEDIA
water

SPECIAL FIRE FIGHTING PROCEDURES
none

UNUSUAL FIRE AND EXPLOSION HAZARDS
none

(Continued on reverse side)

EXHIBIT "A"- 17

SEP 18 1984

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

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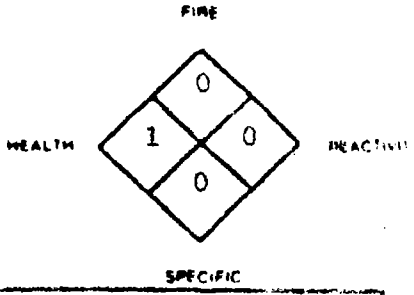

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL COMPANY, INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS 74-III-8 or Basic Soap
CHEMICAL FAMILY potash soap	FORMULA

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
none		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.) water	212	SPECIFIC GRAVITY (H_2O=1)	1.008
VAPOR PRESSURE (mm Hg.)	N.A.	PERCENT, VOLATILE BY VOLUME (%)	85
VAPOR DENSITY (AIR=1)	N.A.	EVAPORATION RATE (_____ =1)	slower than ether
SOLUBILITY IN WATER	complete	pH	11
APPEARANCE AND ODOR	Color: light amber Odor: pleasant		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) Tag Closed Cup	FLAMMABLE LIMITS	Lel	Uel
none to boiling point 200° F. +			
EXTINGUISHING MEDIA water			
SPECIAL FIRE FIGHTING PROCEDURES none required			
UNUSUAL FIRE AND EXPLOSION HAZARDS none			

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Form OSHA-20

EXHIBIT "A"- 18

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

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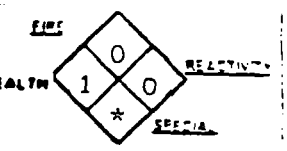
*=SEE SECTION VI



IDENTITY (As Used on Label and List) LAMCO REMOVIT	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name: LAMCO CHEMICAL CO. INC.,	Emergency Telephone Number: (617) 884-8470
Address (Number, Street, City, State, and ZIP Code): 212 Arlington Street	Telephone Number for Information: (617) 884-8470
CHELSEA, MA 02150	Date Prepared: June 22, 1987
	Signature of Preparer (optional): George A. Cleaves

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Ammonia (Aqua) CAS # 1336 - 21 - 6	50 ppm	25 ppm	N.A.	1 - 2%
Isopropyl Alcohol CAS # 67-63-0	400 ppm	500 ppm	N.A.	1 - 3%
Ethanolamine CAS # 141-43-5	N.A.	3 ppm	N.A.	1 - 3%

Section III — Physical/Chemical Characteristics

Boiling Point	212° F	Specific Gravity (H_2O = 1)	1.015
Vapor Pressure (mm Hg)	ca. water	Melting Point	N.A.
Vapor Density (AIR = 1)	ca. water	Evaporation Rate (Butyl Acetate = 1)	slower than ether

Solubility in Water: complete

Appearance and Odor: Amber liquid. Ammoniacal odor pH 12.8

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
TCC - none to boiling. 200° F +	None determined	N.A.	N.A.

Extinguishing Media: Water

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

Disclaimer of Liability

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(Reproduce locally)

OSHA 174, Sept. 1985 modified

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Do not mix with anything but water

Incompatibility (*Materials to Avoid*) Concentrated or strong oxidizing agents.

Hazardous Decomposition or Byproducts Possibly some carbon monoxide

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	Excessive heat.

Section VI — Health Hazard Data

Route(s) of Entry Inhalation? X Skin? X Ingestion? X

Health Hazards (*Acute and Chronic*) Acute: Possible irritation of skin or respiratory system.

Chronic: No chronic data presently available.

Carcinogenicity NTP? No IARC Monographs? No OSHA Regulated? No

Signs and Symptoms of Exposure Irritation of skin, eyes or respiratory system. Excessive inhalation: Could possibly cause headache and nausea.

Medical Conditions Generally Aggravated by Exposure May further aggravate existing skin disorders and/or respiratory ailments.

Emergency and First Aid Procedures EYES: irrigate with water for at least 15 minutes. If irritation persists seek medical attention. SKIN: Wash with water; if irritation persists get medical attention. INGESTION: Give large amounts of fluids, water or milk to dilute. GET IMMEDIATE MEDICAL ATTENTION. INHALATION: Move subject to fresh air; if nausea persists get medical attention.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled Contain spill. Mop up or wet vacuum, then rinse contaminated area with water. Product is infinitely soluble with water. Once more mop up or pick up liquid, this time to reduce slip hazard. Do not allow normal foot traffic on area until dry.

Waste Disposal Method Comply with all local, state & federal regulations. Solutions with pH of 12.5 or higher should NOT be discharged into sewers until pH has been reduced. Neutralization with acids or large amounts of water will accomplis this. If water is used, dilute each unspent part of product with at least 10 parts of water. Then IF local ordinances permit, flush into sewer. Otherwise collect material with suitable absorbent (sand, earth etc.) and bury in approved landfill.

Precautions to Be Taken in Handling and Storing (*and/or* Other Precautions) Keep container closed when not in use. Avoid continued and/or excessive exposure to skin without wearing protective gloves. Avoid splashing into face, particularly eyes, as product is a strong detergent and excessive skin contact or eye contact may cause irritation. As with all cleaning products, KEEP OUT OF REACH OF CHILDREN.

Section VIII — Control Measures

Respiratory Protection (*Specify Type*)
None required in normal ventilated areas. In confined spaces, self contained breathing apparatus may be advisable.

Ventilation	Local Exhaust	N.A.	Special	N.A.
	Mechanical (General)	Adequate	Other	N.A.

Protective Gloves	Rubber or latex gloves recommended.	Eye Protection	Goggles or face shield recommended.

Other Protective Clothing or Equipment Normally not required.

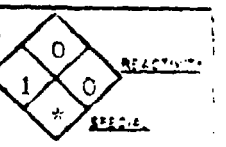
Work/Hygienic Practices Good housekeeping practices apply.

EXHIBIT "A"- 19

Material Safety Data Sheet
May be used to comply with OSHA's Hazard Communication Standard 29 CFR 1910 1200 Standard must be consulted for specific requirements

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No 1218-0072

HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
0=INSIGNIFICANT
*=SEE SECTION VI



IDENTITY (As Used on Label and List)
LAMCO NON-ACID BOWL CLEANER

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name: LAMCO CHEMICAL COMPANY, INC.,	Emergency Telephone Number: (617) 884-8470 **
Address (Number, Street, City, State, and ZIP Code): 212 Arlington Street CHELSEA, MA 02150	Telephone Number for Information: ** Or Local Poison Center
	Date Prepared: Aug 11, 1987
	Signature of Preparer (optional): George A. Cleaves

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
2-Butoxy Ethanol (Ethylene Glycol Butyl Ether) (CAS # 111-76-2)	25 ppm	50 ppm	N.A.	8 - 9%

Section III — Physical/Chemical Characteristics

Boiling Point	212° F	Specific Gravity (H_2O = 1)	1.065
Vapor Pressure (mm Hg)	ca. water	Melting Point	N.A.
Vapor Density (AIR = 1)	ca. water	Evaporation Rate (Butyl Acetate = 1)	slower than ether.
Solubility in Water	complete	pH	13.45
Appearance and Odor	Amber liquid = Lemon odor		

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	None to boiling 200°F + (TCC)	Flammable Limits: None determined	LEL: N.A.	UEL: N.A.
Extinguishing Media	Water			
Special Fire Fighting Procedures	None			
Unusual Fire and Explosion Hazards	None			

Disclaimer of Liability
As conditions or methods of use are beyond our control, we do not assume any responsibilities and expressly disclaim any liability for use of the material. The information contained herein is based on the data available to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

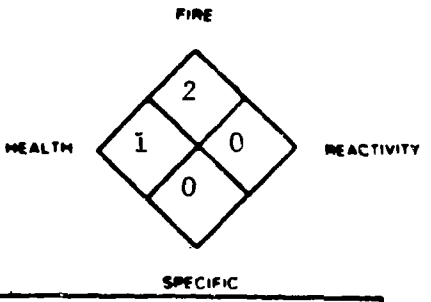
NFPA Designation 704

EXHIBIT "A"- 20

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

HAZARD RATING
4 = EXTREME
3 = HIGH
2 = MODERATE
1 = SLIGHT
0 = INSIGNIFICANT



SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL COMPANY, INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS Final Rinse Aide
CHEMICAL FAMILY	FORMULA

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Isopropyl Alcohol CAS 67-63-0	20	400 ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.) distillation	170-250	SPECIFIC GRAVITY (H_2O=1)	1.006
VAPOR PRESSURE (mm Hg.) estimated	20 mm	PERCENT, VOLATILE BY VOLUME (%)	50
VAPOR DENSITY (AIR=1) estimated	1.5	EVAPORATION RATE (_____ =1)	slower than ether
SOLUBILITY IN WATER	complete	pH	5.5
APPEARANCE AND ODOR	Color: green	Mild odor	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) Tag Closed Cup 114° F.	FLAMMABLE LIMITS	Lel	Uel

EXTINGUISHING MEDIA
Water, spray foam -- dry chemical CO_2

SPECIAL FIRE FIGHTING PROCEDURES
Self contained breathing apparatus recommended for extremely large spills.

UNUSUAL FIRE AND EXPLOSION HAZARDS
Water dilution by 3 - 4 times will minimize combustion hazard.

(Continued on reverse side)

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
See Section II

EFFECTS OF OVEREXPOSURE
May cause eye and skin irritation.

EMERGENCY AND FIRST AID PROCEDURES
Eye and skin contact: flush eyes with large amount of water for at least 15 minutes. See a physician if irritation persists. Wash affected skin areas with soap and water.

SECTION VI - REACTIVITY DATA

STABILITY	**UNSTABLE**		**CONDITIONS TO AVOID** excessive heat
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	**MAY OCCUR**		**CONDITIONS TO AVOID**
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Flush with water if possible or allow to dry and scrape up residue; spilled material may also be absorbed in sand or other inert material.

WASTE DISPOSAL METHOD
If material is diluted with water, flush to sewer if local ordinance permits. Otherwise use sanitary land fill approved by local, state and federal authorities as a disposal site.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
normally none required as product is used in small quantities

VENTILATION	**LOCAL EXHAUST**	**SPECIAL**
	MECHANICAL *(General)*	**OTHER**

PROTECTIVE GLOVES normally not required	**EYE PROTECTION** normally not required

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Avoid splashing into face -- particularly eyes -- as product is a detergent type material and excessive skin or eye contact may cause irritation.

OTHER PRECAUTIONS

NFPA Designation 704

EXHIBIT "A"- 2/

Revised Sept. 1986

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

ATERIAL SAFETY DATA SHEET

HAZARD RATING
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3 = HIGH
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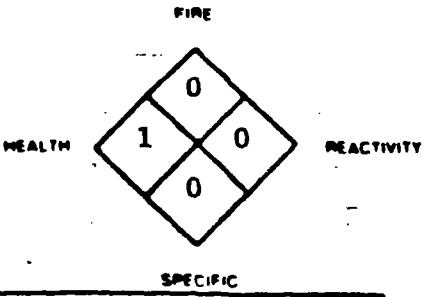
1 = SLIGHT
0 = INSIGNIFICANT



SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL COMPANY, INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS potassium soap (buffered)	TRADE NAME AND SYNONYMS Lamco Ammoniated Stripper
CHEMICAL FAMILY anionic	FORMULA Formulated Product

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS N.A.			BASE METAL N.A.		
CATALYST N.A.			ALLOYS N.A.		
VEHICLE N.A.			METALLIC COATINGS N.A.		
SOLVENTS N.A.			FILLER METAL PLUS COATING OR CORE FLUX N.A.		
ADDITIVES N.A.			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Ammonia CAS #7664-41-7	1.25	50 ppm
Isopropyl Alcohol CAS #67-63-0	2	400 ppm
Ethanolamine CAS #141-43-5	1.68	3 ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	212	SPECIFIC GRAVITY (H_2O=1)	1.015
VAPOR PRESSURE (mm Hg.)	ca. water	PERCENT, VOLATILE BY VOLUME (%)	85
VAPOR DENSITY (AIR=1)	ca. water	EVAPORATION RATE (_____ =1)	slower than ether
SOLUBILITY IN WATER	complete	pH	12.8

APPEARANCE AND ODOR Color: dark amber Odor: ammoniacal

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) Tag Closed Cup	FLAMMABLE LIMITS	Lel	Uel
none to boiling point 200° F. +	none determined		

EXTINGUISHING MEDIA
water

SPECIAL FIRE FIGHTING PROCEDURES
none

UNUSUAL FIRE AND EXPLOSION HAZARDS
none

(Continued on reverse side)

0031-0056

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
See Section II

EFFECTS OF OVEREXPOSURE
Excessive and prolonged vapor inhalation in non-ventilated area may cause nausea.

Irritant to eyes.

EMERGENCY AND FIRST AID PROCEDURES
If nauseated -- remove to fresh air. Get medical attention. Eyes: Flush with water for 15 minutes. Get medical attention. Skin: Wash with warm water.

Ingestion: Induce vomiting. Get medical attention.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	Do not mix with anything but water

INCOMPATABILITY *(Materials to avoid)*
concentrated oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS Possibly some CO

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	Excessive heat

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Flush contaminated area with plenty of water. Product is infinitely soluble. Small spills may be picked up with mop & bucket or wet vacuum. If this is not possible absorb in sand or other inert material.

WASTE DISPOSAL METHOD Comply with all local, state & federal regulations. Solutions with pH 12.5 or higher should NOT be discharged into sewers until pH has been reduced. Large amounts of water or acids will accomplish this. Dilute UNSPENT liquid with about 5 parts of water to each part of cleaner to reduce pH. Then if local ordinance permits flush into sewer. Otherwise absorb in sand or other inert material & bury in approved landfill.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)* Normaly not required; however if used in confined and unventilated area, use an approved ammonia mask.

VENTILATION advisable	LOCAL EXHAUST N.A.	SPECIAL
	MECHANICAL *(General)* Strongly suggested, together with good ventilation.	OTHER

PROTECTIVE GLOVES recommended	EYE PROTECTION goggles recommended

OTHER PROTECTIVE EQUIPMENT Not required

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Avoid excessive inhalation, particularly in enclosed area. Use with adequate ventilation. Avoid continuous or excessive exposure to skin. Do not splash into

OTHER PRECAUTIONS
face - particularly eyes - as product is strong soap and would cause eye irritation.

EXHIBIT "A"- 22

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

HAZARD RATING
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2=MODERATE
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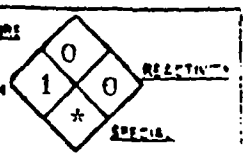
0=INSIGNIFICANT
*=SEE SECTION VI



IDENTITY (As Used on Label and List) LAMCO BISADET	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name LAMCO CHEMICAL CO. INC.,	Emergency Telephone Number (617) 884 - 8470
Address (Number, Street, City, State, and ZIP Code) 212 Arlington Street	Telephone Number for Information (617) 884-8470
CHELSEA, MA 02150	Date Prepared November 16, 1989
	Signature of Preparer (optional) George A. Wann

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Alkyl Dimethyl Benzyl Ammonium Chlorides CAS # 68391-01-5	N.A.	N.A.	N.A.	
Alkyl Dimethyl Ethyl Benzyl Ammonium Chlorides CAS # 68956-79-6	N.A.	N.A.	N.A.	

Section III — Physical/Chemical Characteristics

Boiling Point	212°F	Specific Gravity (H_2O = 1)	1.05
Vapor Pressure (mm Hg)	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1) greater than	1	Evaporation Rate (Butyl Acetate = 1) slower than ether	
Solubility in Water complete			
Appearance and Odor Color: peach	Almond odor	pH 11.3	

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
TCC - None to boiling 210° F +	None determined	N.A.	N.A.

Extinguishing Media: Water or foam

Special Fire Fighting Procedures: Wear self-contained breathing apparatus

Unusual Fire and Explosion Hazards: None known

Disclaimer of Liability

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Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	None known

Incompatibility (*Materials to Avoid*): Anionic materials, strong oxidizers.

Hazardous Decomposition or Byproducts: N.A.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	None known

Section VI — Health Hazard Data

Route(s) of Entry: Inhalation? X Skin? X Ingestion? X

Health Hazards (*Acute and Chronic*): Acute: Possible eye damage and/or skin irritation. Possible irritation respiratory system.

Chronic: No chronic data presently available.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Signs and Symptoms of Exposure: Irritation of skin, eyes or respiratory system. Excessive inhalation in unventilated or confined spaces could cause headache and nausea.

Medical Conditions
Generally Aggravated by Exposure: May further aggravate existing skin disorders and/or respiratory ailments. Harmful if swallowed.

Emergency and First Aid Procedures: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes call physician. If swallowed DO NOT induce vomiting. Drink large amounts of fluid to dilute and call physician immediately. Remove and wash all contaminated clothing before reuse.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled: Flush with water if possible or allow to dry and scrape up residue. Spilled material may also be absorbed in sand or other inert material.

Waste Disposal Method: Comply with all local, state and federal regulations. If local ordinances allow sewer disposal, dilute product with large amounts of water prior to disposal. Otherwise bury in approved landfill.

Precautions to Be Taken in Handling and Storing (*and/or Other Precautions*)

Avoid contamination of food. Store in dry place. Keep container closed when not in use. KEEP OUT OF REACH OF CHILDREN. Wash up thoroughly after handling.

Section VIII — Control Measures

Respiratory Protection (*Specify Type*): None required if normal ventilation is maintained

Ventilation	Local Exhaust N.A.	Special	N.A.
	Mechanical (*General*) Adaquate	Other	N.A.
Protective Gloves	Recommended	Eye Protection	*Goggles or face shield recommended.*

Other Protective Clothing or Equipment: Protective apron recommended.

Work/Hygienic Practices: Good housekeeping practices apply

★ USGPO 1988-491-529/45775

EXHIBIT "A"- 23

Material Safety Data Sheet
May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
0=INSIGNIFICANT
**SEE SECTION VI

Fire: 0 | Health: 1 | Reactivity: 0 | Special: *

IDENTITY (As Used on Label and List) LAMCO "DEWAXER"	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name: LAMCO CHEMICAL CO. INC.,	Emergency Telephone Number: (617) 884-8470
Address (Number, Street, City, State, and ZIP Code): 212 Arlington Street	Telephone Number for Information: (617) 884-8470
CHELSEA, MA 02150	Date Prepared: June 25, 1987
	Signature of Preparer (optional): [signature]

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Mono Ethanolamine (MEA) CAS 141-43-5	3 ppm	N.A.	N.A.	2 – 4%

Section III — Physical/Chemical Characteristics

Boiling Point	212° F	Specific Gravity (H_2O = 1)	1.01
Vapor Pressure (mm Hg.)	ca. water	Melting Point	N.A.
Vapor Density (AIR = 1)	ca. water	Evaporation Rate (Butyl Acetate = 1) Slower than ether	

Solubility in Water: Complete

Appearance and Odor: Amber liquid; Mild odor — pH 11.3

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
TCC – None to boiling 212° F +	None determined	N.A.	N.A.

Extinguishing Media: Water

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

Disclaimer of Liability
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Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Do not mix with anything but water

Incompatibility (*Materials to Avoid*) Concentrated or strong oxidizing agents.

Hazardous Decomposition or Byproducts Possibly some carbon monoxide

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	Excessive heat.

Section VI — Health Hazard Data

Route(s) of Entry Inhalation? X Skin? X Ingestion? X

Health Hazards (*Acute and Chronic*) Acute: Possible irritation of skin or respiratory system.

Chronic: No chronic data presently available.

Carcinogenicity NTP? No IARC Monographs? No OSHA Regulated? No

Signs and Symptoms of Exposure Irritation of skin, eyes or respiratory system. Excessive inhalation: Could possibly cause headache and nausea.

Medical Conditions Generally Aggravated by Exposure May further aggravate existing skin disorders and/or respiratory ailments.

Emergency and First Aid Procedures EYES: irrigate with water for at least 15 minutes. If irritation persists seek medical attention. SKIN: Wash with water; if irritation persists get medical attention. INGESTION: Give large amounts of fluids, water or milk to dilute. GET IMMEDIATE MEDICAL ATTENTION. INHALATION: Move subject to fresh air; if nausea persists get medical attention.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled Contain spill. Mop up or wet vacuum, then rinse contaminated area with water. Product is infinitely soluble with water. Once more mop up or pick up liquid, this time to reduce slip hazard. Do not allow normal foot traffic on area until dry.

Waste Disposal Method Comply with all local, state and federal regulations. If local ordinances allow sewer disposal, dilute material with large amounts of water prior to disposal. Otherwise collect product and dispose of in approved sites or landfill.

Precautions to Be Taken in Handling and Storing (and/or Other Precautions) Keep container closed when not in use. Avoid continued and/or excessive exposure to skin without wearing protective gloves. Avoid splashing into face, particularly eyes, as product is a strong detergent and excessive skin contact or eye contact may cause irritation. As with all cleaning products, KEEP OUT OF REACH OF CHILDREN.

Section VIII — Control Measures

Respiratory Protection (*Specify Type*)
None required in normal ventilated areas. In confined spaces, self contained breathing apparatus may be advisable.

Ventilation	Local Exhaust N.A.	Special	N.A.
	Mechanical (*General*) Adequate	Other	N.A.

Protective Gloves Rubber or latex gloves recommended. Eye Protection Goggles or face shield recommended.

Other Protective Clothing or Equipment Normally not required.

Work/Hygienic Practices Good housekeeping practices apply.

• USGPO 1986-491-529/45775

Lamco Chemical Company, Inc., 212 Arlington St. Chelsea, MA 02150

MATERIAL SAFETY DATA SHEET

Date:2/1/01 Emergency Phone #: (617) 884-8470 Preparer: George L. Lamm
Emergency Response # for Transportation only: Infotrac - 1-800-535-5053

SECTION I - PRODUCT IDENTIFICATION

EXHIBIT "A"-24

Trade Name: **Formula D-325**
Chemical Name / synonyms: Cleaner; Floor Finish & Wax Remover.
D.O.T. Description: **Compounds, Cleaning Liquid, (Contains: Potassium Hydroxide), 8, NA-1760, PG III.**
HAZARD RATING: Health: 1, Fire: 0, Reactivity: 0, Special: 0.
HMIS KEY: 4=Extreme, 3=High, 2=Moderate, 1=Slight, 0=insignificant

SECTION II - HAZARDOUS INGREDIENTS

Ingredient	Weight%	TLV	PEL	CAS #
Ethylyne Glycol Butyl Ether	8	50 ppm	25 ppm	111-76-2
Monoethanolamine (MEA)	6	3 ppm	N.A.	141-43-5
Potassium Hydroxide	0.7	2MG/M3	2MG/M3	1310-58-3

SECTION III - PHYSICAL DATA

Boiling Point (F) 212°
Specific Gravity: 1.07
Vapor Pressure (mm Hg): ca. Water
Evaporation Rate (Water=1): Slower than ether
Vapor Density (Water Vapor = 1):ca. Water
pH: 13.6
Solubility in Water: Complete
Appearance and Odor: Color: Light Green - Odor: Slight Pine

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method used) TCC: 200° F
Flammable Limits - Upper: N.A. - Lower: N.A.
Extinguishing Media: As necessary for surrounding fire.
Special fire fighting procedures: None
Unusual fire and explosion hazards: None

SECTION V - REACTIVITY DATA

Stability: Stable
Conditions to avoid: Do not mix with anything but water.
Incompatibility: Avoid concentrated or strong oxidizing agents.
Hazardous decomposition of products: Carbon monoxide and unidentified organic compounds may be formed during combustion.
Hazardous Polymerization: Will not occur.

This Material Safety Data Sheet was prepared to comply with the OSHA Hazard Communications Regulations and the Massachusetts Right to Know Law.
Disclaimer of Liability.
As conditions or methods of use are beyond our control, we do not assume any responsibilities and expressly disclaim any liability for use of this material. The information contained contained herein is based on available data to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained thereof.

SECTION VI - HEALTH HAZARD DATA - ROUTES OF ENTRY

Threshold Limit Value: - See Section II.
Acute Effects of Exposure and Overexposure:
Eyes: If splashed into eyes will cause irritation.
Skin: Excessive skin contact may cause irritation.
Inhalation: Excessive inhalation may cause headache and/or nausea.
Ingestion: Could cause irritation to mouth - esophagus - and stomach.

Chronic Effects of Exposure: No chronic data available.

Emergency and First Aid Procedures:
Eyes: Irrigate with water for at least 15 minutes. If irritation perists seek medical attention.
Skin: Wash with water. If irritation persists; get medical attention.

Inhalation: Move subject to fresh air; if nausea persists get medical attention.

Ingestion: Give large amounts of fluid, water or milk to dilute.

SECTION VII - SPILL OR LEAK PROCEDURE.

Steps to be taken if material is released or spilled: Contain spill. Mop up or vacuum, then rinse contaminated area with cold water. Product is infinitely soluable with water. Once more mop up or pick up liquid, this time to reduce slip hazard. Do not allow normal foot traffic until area is dry.

Waste Disposal Methods: Comply with all local state and federal regulations. Solutions with pH of 12.5 or higher should NOT be discharged into sewers until pH has been reduced. Neutralization with mild acids or large amount of water will accomplish this. If water is used, dilute each unspent part of product with at least 10 parts of water. Then IF local ordances permit flush into sewer. Otherwise collect material with suitable absorbent. (sand, earth, etc.) and bury in approved landfill.

SECTION VIII - SPECIAL PROTECTION INFORMATION:

Eye Protection: Approved chemical goggles recommended.
Respiratory Protection: None required in normal ventilated areas.
Ventilation: Highly recommended in confined space or areas. Self contained breathing apparatus may be advisable in extreme cases.
Protective Gloves and/or Clothing: Gloves recommended.

SECTION IX - SPECIAL PRECAUTIONS:

Precautions to be taken in storage and handling: Keep container tightly closed when not in use.Store above 35°F. As with all cleaning products:
KEEP OUT OF REACH OF CHILDREN

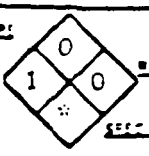
EXHIBIT "A"- 25

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard. 29 CFR 1910.1200 Standard must be consulted for specific requirements

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No 1218-0072

HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
0=INSIGNIFICANT
*=SEE SECTION VI



IDENTITY (As Used on Label and List)	Note: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.
LAMCO HEAVY DUTY CLEANER & DEGREASER	

Section I EMERGENCY RESPONSE NUMBER FOR TRANSPORT ONLY: INFOTRAC 1-800-535-5053

Manufacturer's Name: LAMCO CHEMICAL COMPANY INC.,	Emergency Telephone Number: (617) 884-8470
Address (Number, Street, City, State, and ZIP Code):	Telephone Number for Information: (617) 884-8470
212 Arlington Street	Date Prepared: Jan 2, 1997
CHELSEA, MA 02150	Signature of Preparer (optional): George W. Cowan

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
2-Butoxy Ethanol (Ethylene Glycol Butyl Ether) (CAS # 111-76-2)	25 ppm	50 ppm	N.A.	8 - 9%
Potassium Hydroxide (CAS # 1310 - 58 - 3)	2MG/M3	2MG/M3	2MG/M3 TLV	Less than 1%

Section III — Physical/Chemical Characteristics

Boiling Point	212° F	Specific Gravity (H_2O = 1)	1.065
Vapor Pressure (mm Hg)	ca. water	Melting Point	N.A.
Vapor Density (AIR = 1)	ca. water	Evaporation Rate (Butyl Acetate = 1)	slower than ether.
Solubility in Water	complete	pH 13.45	
Appearance and Odor	COLOR: Light amber.	ODOR: Pleasant	

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used) None to boiling; 200°F + (TCC)	Flammable Limits: None determined	LEL: N.A.	UEL: N.A.
Extinguishing Media: Water			
Special Fire Fighting Procedures: None			
Unusual Fire and Explosion Hazards: None			

Disclaimer of Liability

As conditions or methods of use are beyond our control, we do not assume any responsibilities and expressly disclaim any liability for use of the material. The information contained herein is based on the data available to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Do not mix with anything but water

Incompatibility (*Materials to Avoid*) Concentrated or strong oxidizing agents.

Hazardous Decomposition or Byproducts Possibly some carbon monoxide

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	Excessive heat.

Section VI — Health Hazard Data

Route(s) of Entry Inhalation? X Skin? X Ingestion? X

Health Hazards (*Acute and Chronic*) Acute: Possible irritation of skin or respiratory system.

Chronic: No chronic data presently available.

Carcinogenicity NTP? No IARC Monographs? No OSHA Regulated? No

Signs and Symptoms of Exposure Irritation of skin, eyes or respiratory system. Excessive inhalation: Could possibly cause headache and nausea.

Medical Conditions Generally Aggravated by Exposure May further aggravate existing skin disorders and/or respiratory ailments.

Emergency and First Aid Procedures EYES: irrigate with water for at least 15 minutes. If irritation persists seek medical attention. SKIN: Wash with water; if irritation persists get medical attention. INGESTION: Give large amounts of fluids, water or milk to dilute. GET IMMEDIATE MEDICAL ATTENTION. INHALATION: Move subject to fresh air; if nausea persists get medical attention.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled Contain spill. Mop up or wet vacuum, then rinse contaminated area with water. Product is infinitely soluble with water. Once more mop up or pick up liquid, this time to reduce slip hazard. Do not allow normal foot traffic on area until dry.

Waste Disposal Method Comply with all local, state & federal regulations. Solutions with pH of 12.5 or higher should NOT be discharged into sewers until pH has been reduced. Neutralization with acids or large amounts of water will accomplish this. If water is used, dilute each unspent part of product with at least 10 parts of water. Then IF local ordinances permit, flush into sewer. Otherwise collect material with suitable absorbent (sand, earth etc.) and bury in approved landfill.

Precautions to Be Taken in Handling and Storing (*and/or Other Precautions*) Keep container closed when not in use. Avoid continued and/or excessive exposure to skin without wearing protective gloves. Avoid splashing into face, particularly eyes, as product is a strong detergent and excessive skin contact or eye contact may cause irritation. As with all cleaning products, KEEP OUT OF REACH OF CHILDREN.

Section VIII — Control Measures

Respiratory Protection (*Specify Type*)
None required in normal ventilated areas. In confined spaces, self contained breathing apparatus may be advisable.

Ventilation	Local Exhaust N.A.	Special	N.A.
	Mechanical (*General*) Adequate	Other	N.A.

Protective Gloves	Rubber or latex gloves recommended.	Eye Protection	Goggles or face shield recommended.

Other Protective Clothing or Equipment Normally not required.

Work/Hygienic Practices Good housekeeping practices apply.

• USGPO 1984-491-529/45775

Material Safety Data Sheet
May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE

Health 1, Fire 2, Reactivity 0, Special *

EXHIBIT "A"-26

IDENTITY (As Used on Label and List)
LAMCO "INSTANT CLEAR" (Glass Cleaner)

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name LAMCO CHEMICAL CO. INC.,	Emergency Telephone Number: (617) 884-8470
Address (Number, Street, City, State, and ZIP Code) 212 Arlington Street	Telephone Number for Information: same
CHELSEA, MA 02150	Date Prepared: July 1, 1987
	Signature of Preparer (optional): [signature]

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Isopropyl Alcohol CAS # 67-63-0	400 ppm	500 ppm	N.A.	18 - 22%
2 - Butoxy Ethanol CAS # 111-76-2 (Ethylene Glycol Butyl Ether)	25 ppm	50 ppm	N.A.	4 -. 6%

Section III — Physical/Chemical Characteristics

Boiling Point	distillation	170 - 250	Specific Gravity (H_2O = 1)	0.975
Vapor Pressure (mm Hg)	estimated	20 mm	Melting Point	N.A.
Vapor Density (AIR = 1)	estimated	1.5	Evaporation Rate (Butyl Acetate = 1) slower than ether	

Solubility in Water: complete

Appearance and Odor: Bluish liquid - slight ammonia odor pH 10.8

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used) TCC 178° F	Flammable Limits none determined	LEL N.A.	UEL N.A.

Extinguishing Media: Water (Dilution) Spray, Foam, Dry Chemical CO_2

Special Fire Fighting Procedures: Self contained breathing apparatus recommended for extremely large spills.

Unusual Fire and Explosion Hazards: Water dilution by 3 - 4 times will minimize combustion hazard.

Disclaimer of Liability
As conditions or methods of use are beyond our control, we do not assume any responsibilities and expressly disclaim any liability for use of the material. The information contained herein is based on the data available to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Do not mix with anything but water

Incompatibility (*Materials to Avoid*): Concentrated acids and strong oxidizers

Hazardous Decomposition or Byproducts: Will generate carbon monoxide and carbon dioxide when burning.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	Heat, sparks and open flames.

Section VI — Health Hazard Data

Route(s) of Entry: Inhalation? X Skin? X Ingestion? X

Health Hazards (*Acute and Chronic*): Acute: Possible irritation of skin or respiratory system.

Chronic: No chronic data presently available.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Signs and Symptoms of Exposure: Possible irritation of skin,eyes or respiratory system. If inhaled in high concentrations may cause dizziness & nausea. Ingestion may cause gastric distress,nausea & vomitr

Medical Conditions Generally Aggravated by Exposure: May further aggravate existing skin disorders and/or respiratory ailments.

Emergency and First Aid Procedures: EYES: Flush with water for at least 15 minutes. GET MEDICAL ATTENTION. SKIN: Wash with water. Remove contaminated clothes and shoes. INHALATION: Remove person(s) to fresh air. INGESTION: Give several glasses of milk or water to dilute stomach content. DO NOT INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled: COMBUSTIBLE MATERIAL: Ventilate area. Remove sources of ignition. If possible dilute with water to reduce combustion hazard. Absorb with inert material (sand, earth etc.) and remove outside, if possible, for safe evaporation. Vapor is heavier than air and could travel to distant ignition sources.

Waste Disposal Method: COMPLY WITH ALL LOCAL, STATE & FEDERAL REGULATIONS. If local ordinances permit, dispose of by diluting with large amounts of water and flushing same into accepted sewer system. If local lawsDO NOT ALLOW SEWER DISPOSAL collect material with inert material and after save evaporation of vapors bury in approved site or landfill.

Precautions to Be Taken in Handling and Storing (*and/or* Other Precautions)

Keep container closed when not in use. Store away from heat, sparks and open flame. Like all detergents and cleaning products: K E E P O U T O F R E A C H O F C H I L D R E N.

Section VIII — Control Measures

Respiratory Protection (*Specify Type*): None required in ventilated areas. In confined spaces a self contained breathing apparatus is advisable.

Ventilation	Local Exhaust: N.A.	Special: N.A.	
	Mechanical (*General*): Recommended	Other: N.A.	
Protective Gloves: Recommended		Eye Protection: Goggles or face shield recommended.	

Other Protective Clothing or Equipment: Normally not required

Work/Hygienic Practices: Good housekeeping practices apply.

• USGPO 1984-491-529/45775

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
NIFICANT
ECTION 'VI

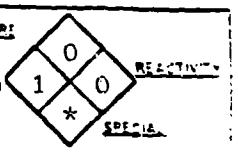


EXHIBIT "A"-27

IDENTITY *(As Used on Label and List)*
LAMCO "LIQUI-SUDS" (Liquid Hand Dish Wash)

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name: LAMCO CHEMICAL CO. INC.,	Emergency Telephone Number: (617) 884-8470**
Address *(Number, Street, City, State, and ZIP Code)*: 212 Arlington Street	Telephone Number for Information: same ** Or Local Poison Center
CHELSEA, MA 02150	Date Prepared: July 21, 1987
	Signature of Preparer *(optional)*: George G. Cream

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% *(optional)*
Components not classified hazardous by nature or concentration.				

Section III — Physical/Chemical Characteristics

Boiling Point	212 ° F	Specific Gravity (H_2O = 1)	1.020
Vapor Pressure (mm Hg)	ca. water	Melting Point	N.A.
Vapor Density (AIR = 1)	ca. water	Evaporation Rate (Butyl Acetate = 1)	Slower than ether.

Solubility in Water: complete

Appearance and Odor: Pink - slightly viscous liquid; flowery odor pH 6

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
TCC. - None to boiling 200° F plus	none determined	N.A.	N.A.

Extinguishing Media: Water

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

Disclaimer of Liability

As conditions or methods of use are beyond our control, we do not assume any responsibilities and expressly disclaim any liability for use of the material. The information contained herein is based on the data available to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Do not mix with anything but water

Incompatibility (*Materials to Avoid*) Strong acids and concentrated oxidizing agents.

Hazardous Decomposition or Byproducts Possibly carbon monoxide

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	Extreme temperatures, hot or cold.

Section VI — Health Hazard Data

Route(s) of Entry: Inhalation? N.A. Skin? X Ingestion? X

Health Hazards (*Acute and Chronic*) None known.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Signs and Symptoms of Exposure If used excessively without gloves and over long periods could possibly cause skin irritation. If splashed into eyes will cause irritation.

Medical Conditions Generally Aggravated by Exposure Use of product if skin rash or similar problem exists on hands, would most likely aggravate the situation.

Emergency and First Aid Procedures EYES: Flush with large amounts of water for at least 15 minutes. If If irritation persists, get medical attention. SKIN: Wash with warm water; dry and apply hand lotion. If irritation persists get medical attention. INGESTION: Administer water or milk to dilute. GET IMMEDIATE MEDICAL ATTENTION.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled Keep spectators away, floor may be slippery. SMALL SPILLS: Mop up or wet vacuum; let area dry. LARGE SPILLS: Dike and contain with inert material (sand, earth, etc.) and transfer to separate containers for disposal.

Waste Disposal Method Comply with all local, state and federal regulations. If local ordinances allow sewer disposal, dilute material with large amounts of water prior to disposal. Otherwise collect the product with the aid of inert material and dispose of in approved sites or landfill.

Precautions to Be Taken in Handling and Storing (and/or Other Precautions)

Keep containers closed when not in use. KEEP OUT OF REACH OF CHILDREN

Section VIII — Control Measures

Respiratory Protection (*Specify Type*) None required if good and normal ventilation is maintained.

Ventilation	Local Exhaust N.A.	Special	N.A.
	Mechanical (*General*) Adaquate	Other	N.A.
Protective Gloves	Recommended	Eye Protection	Recommended

Other Protective Clothing or Equipment Normally not needed

Work/Hygienic Practices Good housekeeping practices apply.

• USGPO 1986-491-529/45775

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
0=INSIGNIFICANT
SEE SECTION VI
HEALTH 0
REACTIVITY 1
SPECIAL 0
* 0

EXHIBIT "A"- 28

IDENTITY (As Used on Label and List)	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.
LAMCO "LIQUID HAND SOAP"	

Section I

Manufacturer's Name: LAMCO CHEMICAL CO. INC.,	Emergency Telephone Number: (617) 884-8470 **
Address (Number, Street, City, State, and ZIP Code): 212 Arlington Street	Telephone Number for Information: same ** Or Local Poison Center
CHELSEA, MA 02150	Date Prepared: July 22, 1987
	Signature of Preparer (optional): George G. Cramin

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Components not classified hazardous by nature or concentration.				

Section III — Physical/Chemical Characteristics

Boiling Point	212 ° F	Specific Gravity (H_2O = 1)	1.016
Vapor Pressure (mm Hg)	ca. water	Melting Point	N.A.
Vapor Density (AIR = 1)	ca. water	Evaporation Rate (Butyl Acetate = 1)	slower than ether

Solubility in Water: complete

Appearance and Odor: Amber liquid, faint but non-descriptive odor. pH 9.4

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
TCC. - None to boiling 200° F plus	none determined	N.A.	N.A.

Extinguishing Media: Water

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

Disclaimer of Liability

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Section V — Reactivity Data

Stability			Conditions to Avoid
	Unstable		Do not mix with anything but water
	Stable	X	

Incompatibility (*Materials to Avoid*): Strong acids and/or concentrated oxidizing agents.

Hazardous Decomposition or Byproducts: Possibly carbon monoxide

Hazardous Polymerization			Conditions to Avoid
	May Occur		
	Will Not Occur	X	Excessive heat

Section VI — Health Hazard Data

Route(s) of Entry: Inhalation? N.A. Skin? N.A. Ingestion? N.A.

Health Hazards (*Acute and Chronic*): Acute: May irritate extremely sensitive skin

Chronic: No chronic data presently available

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Signs and Symptoms of Exposure: Irritation of eyes or skin.

Medical Conditions Generally Aggravated by Exposure: May aggravate existing skin disorders.

Emergency and First Aid Procedures: EYES: Irrigate with water for at least 15 minutes. If irritation persists seek medical attention. SKIN: Wash with warm water; dry and apply hand lotion. If irritation persists get medical attention. INGESTION: Give large amounts of fluids, water or milk to dilute. GET IMMEDIATE MEDICAL ATTENTION.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled: Contain spill. Mop up or wet vacuum, then rinse contaminated area with water. Product is infinitely soluable with water. Once more mop up & pick up liquid, this time to reduce slip hazard. Do not allow normal foot traffic on area until dry.

Waste Disposal Method: Comply with all local, state and federal regulations. If local ordinances allow sewer disposal, dilute material with water prior to disposal. Otherwise collect product with inert material (sand, earth, etc.) and dispose of in approved sites or landfill.

Precautions to Be Taken in Handling and Storing (and/or Other Precautions)

Keep container closed when not in use. Do not splash into eyes.
KEEP OUT OF REACH OF CHILDREN

Section VIII — Control Measures

Respiratory Protection (*Specify Type*): None required in normal ventilated areas

Ventilation			
	Local Exhaust: N.A.	Special: N.A.	
	Mechanical (*General*): Adaquate	Other: N.A.	

Protective Gloves: N.A. Eye Protection: recommended if product is used excessively.

Other Protective Clothing or Equipment: N.A.

Work/Hygienic Practices: Good housekeeping practices apply

• USGPO 1986-491-529/45775

EHIBIT "A"

29

Lamco Chemical Company, Inc., 212 Arlington St. Chelsea, MA 02150

MATERIAL SAFETY DATA SHEET

Date:Jan.2, 2003. Emergency Phone #:(617)884-8470 Preparer: George L. Lamm
Emergency Response # for Transportation only: Infotrac - 1-800-535-5053

SECTION I - PRODUCT IDENTIFICATION

3M ID #: 11-0021-3098-4

Trade Name: MR-50 Special Cleaner
Chemical Name: Special Cleaner and Degreaser.
D.O.T. Description: Non-Hazardous - Formula: Mixture.
HAZARD RATING: Health: 1, Fire: 0, Reactivity: 0, Special: - .
HMIS KEY: 4=Extreme, 3=High, 2=Moderate, 1=Slight, 0=insignificant

SECTION II - HAZARDOUS INGREDIENTS

Ingredient	%	TLV	PEL	CAS #
Ethylene Glycol Butyl Ether	4.67	50 Ppm	25 Ppm	111-76-2

SECTION III - PHYSICAL DATA

Boiling Point: 212°F.
Specific Gravity: 1.06
Vapor Pressure (mm Hg): ca. Water
Evaporation Rate(Water=1): Slower than ether.
Vapor Density(Water Vapor=1):ca.Water
pH: 12.2
Solubility in Water: Complete
Appearance and Odor: Color: Blue - Odor: Pleasant.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method used) TCC: None to Boiling (200° F +)
Flammable Limits - Upper: N.A. - Lower: N.A.
Extinguishing Media: As necessary for surrounding fire.
Special fire fighting procedures: None
Unusual fire and explosion hazards: None

SECTION V - REACTIVITY DATA

Stability: Stable
Conditions to avoid: Do not mix with anything but water.
Incompatibility: (Avoid) Concentrated or strong oxidizing agents.
Hazardous decomposition of products: carbon monoxide and unidentified organic compounds may be formed during combustion.
Hazardous Polymerization: Will not occur.

This Material Safety Data Sheet was prepared to comply with the OSHA Hazard Communications Regulations and the Massachusetts Right to Know Law.
Disclaimer of Liability.
As conditions or methods of use are beyond our control, we do not assume any responsibilities and expressly disclaim any liability for use of this material. The information contained contained herein is based on available data to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained thereof.

SECTION VI - HEALTH HAZARD DATA - ROUTES OF ENTRY

Threshold Limit Value: - See Section II.
Acute Effects of Exposure and Overexposure:
Eyes: If splashed into eyes will cause irritation.
Skin: Excessive skin contact may cause irritation.
Inhalation: Excessive inhalation may cause headache and/or nausea.
Ingestion: Could cause irritation to mouth - esophagus - and stomach.

Chronic Effects of Exposure: No chronic data available.

Emergency and First Aid Procedures:
Eyes: Irrigate with water for at least 15 minutes. If irritation perists seek medical attention.
Skin: Wash with water. If irritation persists; get medical attention.

Inhalation: Move subject to fresh air; if nausea persists get medical attention.

Ingestion: Give large amounts of fluid, water or milk to dilute.

SECTION VII - SPILL OR LEAK PROCEDURE.

Steps to be taken if material is released or spilled: Contain spill. Mop up or vacuum, then rinse contaminated area with cold water. Product is infinitely soluable with water. Once more mop up or pick up liquid, this time to reduce slip hazard. Do not allow normal foot traffic until area is dry.

Waste Disposal Methods: Comply with all local state and federal regulations. Solutions with pH of 12.5 or higher should NOT be discharged into sewers until pH has been reduced. Neutralization with mild acids or large amount of water will accomplish this. If water is used, dilute each unspent part of product with at least 10 parts of water. Then IF local ordances permit flush into sewer. Otherwise collect material with suitable absorbent. (sand, earth, etc.) and bury in approved landfill.

SECTION VIII - SPECIAL PROTECTION INFORMATION:

Eye Protection: Approved chemical goggles recommended.
Respiratory Protection: None required in normal ventilated areas.
Ventilation: Highly recommended in confined space or areas. Self contained breathing apparatus may be advisable in extreme cases.
Protective Gloves and/or Clothing: Gloves recommended.

SECTION IX - SPECIAL PRECAUTIONS:

Precautions to be taken in storage and handling: Keep container tightly closed when not in use.Store above 35°F. As with all cleaning products:
KEEP OUT OF REACH OF CHILDREN

NFPA Designation 704

Revised Sept. 1986

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

HAZARD RATING
4 = EXTREME
3 = HIGH
2 = MODERATE
1 = SLIGHT
0 = INSIGNIFICANT

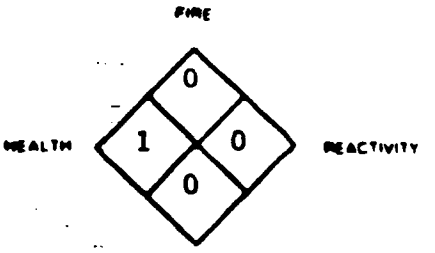


EXHIBIT "A"-30

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL COMPANY, INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS: Amine Soap	TRADE NAME AND SYNONYMS: Miracle Cleaner
CHEMICAL FAMILY: Anionic Soap	FORMULA: N.A.

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS		N.A.	BASE METAL		N.A.
CATALYST		N.A.	ALLOYS		N.A.
VEHICLE		N.A.	METALLIC COATINGS		N.A.
SOLVENTS		N.A.	FILLER METAL PLUS COATING OR CORE FLUX		N.A.
ADDITIVES		N.A.	OTHERS		N.A.
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Isopropyl Alcohol CAS #67-63-0	6	400
		ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	N.A.	SPECIFIC GRAVITY (H_2O=1)	.985
VAPOR PRESSURE (mm Hg.)	N.A.	PERCENT, VOLATILE BY VOLUME (%)	87
VAPOR DENSITY (AIR=1)	N.A.	EVAPORATION RATE (_____ =1)	slower than ether
SOLUBILITY IN WATER	complete	pH	8.8
APPEARANCE AND ODOR	Color: light tan	Odor: light pine	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
Tag Closed Cup none to boiling point 200° F. +	none		

EXTINGUISHING MEDIA
water

SPECIAL FIRE FIGHTING PROCEDURES
none

UNUSUAL FIRE AND EXPLOSION HAZARDS
none

(Continued on reverse side)

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
See Section II

EFFECTS OF OVEREXPOSURE
See Section IX

EMERGENCY AND FIRST AID PROCEDURES
Eyes: slight irritation possible. If accidentally splashed into eyes, flush with water. If irritation persists, call physician.

SECTION VI - REACTIVITY DATA

STABILITY	**UNSTABLE**		**CONDITIONS TO AVOID**
	STABLE	X	Do not mix with anything but water.

INCOMPATABILITY *(Materials to avoid)* Acids and Oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS Possibly some Carbon Monoxide

HAZARDOUS POLYMERIZATION	**MAY OCCUR**		**CONDITIONS TO AVOID**
	WILL NOT OCCUR	X	Exessive heat

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Normal procedure for spillage of liquid soaps. Mop us and flush or rinse with water

WASTE DISPOSAL METHOD This is a mild, biodegradable vegetable oil soap. If local ordinance permits, flush into sewer, otherwise bury in approved landfill.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)* None required

VENTILATION	**LOCAL EXHAUST**	None required.	**SPECIAL**	N.A.
	MECHANICAL *(General)*	None required.	**OTHER**	N.A.

PROTECTIVE GLOVES Not needed **EYE PROTECTION** recommended

OTHER PROTECTIVE EQUIPMENT None required.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Product is a mild soap -- avoid splashing into eyes.

OTHER PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
0=INSIGNIFICANT
SECTION VI

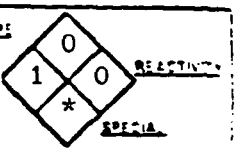


EXHIBIT "A"-31

IDENTITY *(As Used on Label and List)*
LAMCO "PINE CLEANER & DEODORIZER"

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name: LAMCO CHEMICAL CO. INC.,	Emergency Telephone Number: (617) 884-8470 **
Address *(Number, Street, City, State, and ZIP Code)*: 212 Arlington Street	Telephone Number for Information: same ** Or Local Poison Center
CHELSEA, MA 02150	Date Prepared: July 21, 1987
	Signature of Preparer *(optional)*: George A. Cleaves

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% *(optional)*
Components not classified hazardous by nature or concentration.				

Section III — Physical/Chemical Characteristics

Boiling Point	212° F	Specific Gravity (H_2O = 1)	0.985
Vapor Pressure (mm Hg)	ca. water	Melting Point	N.A.
Vapor Density (AIR = 1)	ca. water	Evaporation Rate (Butyl Acetate = 1)	Slower than ether

Solubility in Water: complete

Appearance and Odor: Amber liquid, distinctive pine odor. pH 11

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
TCC. - None to boiling 200° F plus.	none determined	N.A.	N.A.

Extinguishing Media: Water

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

Disclaimer of Liability
As conditions or methods of use are beyond our control, we do not assume any responsibilities and expressly disclaim any liability for use of the material. The information contained herein is based on the data available to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

(Reproduce locally)

OSHA 174, Sept 1985
modified

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Do not mix with anything but water

Incompatibility (*Materials to Avoid*) Concentrated or strong oxidizing agents.

Hazardous Decomposition or Byproducts Possibly some carbon monoxide

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	Excessive heat.

Section VI — Health Hazard Data

Route(s) of Entry Inhalation? X Skin? X Ingestion? X

Health Hazards (*Acute and Chronic*) Acute: Possible irritation of skin or respiratory system.

Chronic: No chronic data presently available.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Signs and Symptoms of Exposure Irritation of skin, eyes or respiratory system. Excessive inhalation: Could possibly cause headache and nausea.

Medical Conditions Generally Aggravated by Exposure May further aggravate existing skin disorders and/or respiratory ailments.

Emergency and First Aid Procedures EYES: irrigate with water for at least 15 minutes. If irritation persists seek medical attention. SKIN: Wash with water; if irritation persists get medical attention. INGESTION: Give large amounts of fluids, water or milk to dilute. GET IMMEDIATE MEDICAL ATTENTION. INHALATION: Move subject to fresh air; if nausea persists get medical attention.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled Contain spill. Mop up or wet vacuum, then rinse contaminated area with water. Product is infinitely soluble with water. Once more mop up or pick up liquid, this time to reduce slip hazard. Do not allow normal foot traffic on area until dry.

Waste Disposal Method Comply with all local, state and federal regulations. If local ordinances allow sewer disposal, dilute material with large amounts of water prior to disposal. Otherwise collect product and dispose of in approved sites or landfill.

Precautions to Be Taken in Handling and Storing (and/or Other Precautions) Keep container closed when not in use. Avoid continued and/or excessive exposure to skin without wearing protective gloves. Avoid splashing into face, particularly eyes, as product is a strong detergent and excessive skin contact or eye contact may cause irritation. As with all cleaning products, KEEP OUT OF REACH OF CHILDREN.

Section VIII — Control Measures

Respiratory Protection (*Specify Type*) None required in normal ventilated areas.

Ventilation	Local Exhaust	N.A.	Special	N.A.
	Mechanical (*General*)	Adaquate	Other	N.A.

Protective Gloves Rubber or latex gloves recommended. Eye Protection Goggles or face shield recommended.

Other Protective Clothing or Equipment Normally not required.

Work/Hygienic Practices Good housekeeping practices apply.

• USGPO 1986-491-529/45775

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
0=INSIGNIFICANT
PROTECTION "V"

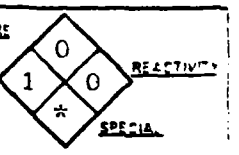


EXHIBIT "A"- 32

IDENTITY *(As Used on Label and List)* LAMCO SPEED STRIP

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name: LAMCO CHEMICAL COMPANY, INC.	Emergency Telephone Number: (617) 884-8470
Address *(Number, Street, City, State, and ZIP Code)*: 212 Arlington Street, CHELSEA, MA 02150	Telephone Number for Information: (617) 884-8470
	Date Prepared: June 20, 1987
	Signature of Preparer *(optional)*: George A. Cramm

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% *(optional)*
2-Butoxy Ethanol (Ethylene Glycol Butyl Ether (CAS # 111-76-2)	25 ppm	50 ppm	N.A.	8 - 9%
Monoethanolamine (MEA) (CAS # 141-43-5	N.A.	3 ppm	N.A.	5 - 7%

Section III — Physical/Chemical Characteristics

Boiling Point	212° F	Specific Gravity (H_2O = 1)	1.07
Vapor Pressure (mm Hg.)	ca. water	Melting Point	N.A.
Vapor Density (AIR = 1)	ca. water	Evaporation Rate (Butyl Acetate = 1)	slower than ether
Solubility in Water	complete		
Appearance and Odor	COLOR: Light green ODOR: Slight pine scent		pH 13.6

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
TCC. None to boiling 200 ° F +	None determined	N.A.	N.A.

Extinguishing Media: Water

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

Disclaimer of Liability

As conditions or methods of use are beyond our control, we do not assume any responsibilities and expressly disclaim any liability for use of the material. The information contained herein is based on the data available to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Do not mix with anything but water

Incompatibility (*Materials to Avoid*) Concentrated or strong oxidizing agents.

Hazardous Decomposition or Byproducts Possibly some carbon monoxide

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	Excessive heat.

Section VI — Health Hazard Data

Route(s) of Entry Inhalation? X Skin? X Ingestion? X

Health Hazards (*Acute and Chronic*) Acute: Possible irritation of skin or respiratory system.

Chronic: No chronic data presently available.

Carcinogenicity NTP? No IARC Monographs? No OSHA Regulated? No

Signs and Symptoms of Exposure Irritation of skin, eyes or respiratory system. Excessive inhalation: Could possibly cause headache and nausea.

Medical Conditions Generally Aggravated by Exposure May further aggravate existing skin disorders and/or respiratory ailments.

Emergency and First Aid Procedures EYES: irrigate with water for at least 15 minutes. If irritation persists seek medical attention. SKIN: Wash with water; if irritation persists get medical attention. INGESTION: Give large amounts of fluids, water or milk to dilute. GET IMMEDIATE MEDICAL ATTENTION. INHALATION: Move subject to fresh air; if nausea persists get medical attention.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled Contain spill. Mop up or wet vacuum, then rinse contaminated area with water. Product is infinitely soluble with water. Once more mop up or pick up liquid, this time to reduce slip hazard. Do not allow normal foot traffic on area until dry.

Waste Disposal Method Comply with all local, state & federal regulations. Solutions with pH of 12.5 or higher should NOT be discharged into sewers until pH has been reduced. Neutralization with acids or large amounts of water will accomplish this. If water is used, dilute each unspent part of product with at least 10 parts of water. Then IF local ordinances permit, flush into sewer. Otherwise collect material with suitable absorbent (sand, earth etc.) and bury in approved landfill.

Precautions to Be Taken in Handling and Storing (*and/or* Other Precautions) Keep container closed when not in use. Avoid continued and/or excessive exposure to skin without wearing protective gloves. Avoid splashing into face, particularly eyes, as product is a strong detergent and excessive skin contact or eye contact may cause irritation. As with all cleaning products, KEEP OUT OF REACH OF CHILDREN.

Section VIII — Control Measures

Respiratory Protection (*Specify Type*)
None required in normal ventilated areas. In confined spaces, self contained breathing apparatus may be advisable.

Ventilation	Local Exhaust	N.A.	Special	N.A.
	Mechanical (*General*)	Adequate	Other	N.A.

Protective Gloves Rubber or latex gloves recommended. Eye Protection Goggles or face shield recommended.

Other Protective Clothing or Equipment Normally not required.

Work/Hygienic Practices Good housekeeping practices apply.

• USGPO 1986-491-529/45775

Lamco Chemical Company, Inc., 212 Arlington St. Chelsea, MA 02150

MATERIAL SAFETY DATA SHEET

Date: Emergency Phone #: (617) 884-8470 Preparer: George L. Lamm
Emergency Response# for Transportation only: Infotrac - 1-800-535-5053

SECTION I - PRODUCT IDENTIFICATION

EXHIBIT "A"-33

Trade Name: SIZZLER
Chemical Name / synonyms: RUG CLEANER AND DETERGENT
D.O.T. Description: COMPOUNDS, CLEANING.
HAZARD RATING: Health:1, Fire:0, Reactivity:0,Special:O. .
HMIS KEY: 4=Extreme, 3=High, 2=Moderate, 1=Slight, 0=insignificant

SECTION II - HAZARDOUS INGREDIENTS

Ingredient -	Weight% -	TLV -	PEL -	CAS#
2-Butoxy Ethanol	14 - 17%	50 ppm	25 ppm	111-76-2

SECTION III - PHYSICAL DATA

Boiling Point (F) 212°
Specific Gravity: .995
Vapor Pressure (mm Hg) ca. Water
Evaporation Rate (Water=1):
Slower than ether
Vapor Density (Water Vapor = 1) ca. Water
pH:7
Solubility in Water: Complete
Appearance and Odor: Water colored slightly viscous liquid. Odorless.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method used) TCC: None to boiling 200° F plus.
Flammable Limits - Upper: N.A. - Lower: N.A.
Extinguishing Media: Water
Special fire fighting procedures: None
Unusual fire and explosion hazards: None

SECTION V - REACTIVITY DATA

Stability: Stable
Conditions to avoid: Do not mix with anything but vater.
Incompatibility:Avoid strong acids or concentrated oxidizers.
Hazardous decomposition of products:Possibly carbon monoxide.
Hazardous Polymerization: Will not occur.

This Material Safety Data Sheet was prepared to comply with the OSHA Hazard Communications Regulations and the Massachusetts Right to Know Law.
Disclaimer of Liability.
As conditions or methods of use are beyond our control, we do not assume any responsi-bilities and expressly disclaim any liability for use of this material. The infor-mation contained contained herein is based on available data to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained thereof.

SECTION VI - HEALTH HAZARD DATA - ROUTES OF ENTRY:

Threshold Limit Value: - See Section II.
Acute Effects of Exposure and Overexposure:
Eyes: If splashed into eyes will cause irritation.
Skin: May irritate extremely sensitive skin.
Inhalation: Non expected with acqueous solutions and mixtures.
Ingestion: In case of accidental swallowing, consult a doctor at once.
(See section on Emergency procedures and First Aid).
Chronic Effects of Exposure: No chronic data available.

EMERGENCY AND FIRST AID PROCEDURES:

Eyes: Irrigate with water for at least fifteen minutes. If irritation persists, seek medical attention.
Skin: Wash with soap and water. If irritation persist get medical attention.
Inhalation: not applicable.
Ingestion: In case of accidental swallowing, administer 3 to 4 glasses of water. Do not induce vomitting. Obtain medical attention and/or hospital treatment as soon as possible.

SECTION VII - SPILL OR LEAK PROCEDURE.

Steps to be taken if material is released or spilled:
Contain spill. Mop-up or wet vac area. Then rinse contaminated area with water. Product is a water soluble detergent. Once more mop-up area or pick up liquid, this time to reduce slip hazard. Do not allow normal foot traffic until area is dry.

Waste Disposal Methods: Comply with all local, state and federal regulations. IF local or state ordinances permit , flush into sewer. Otherwise collect material with a suitable absorbent. (Sand, earth, etc.) and bury in approved landfill.

SECTION VIII - SPECIAL PROTECTION INFORMATION:

Eye Protection: Approveed chemical goggles recommended.
Respiratory Protection: None required in normal ventilated areas.
Ventilation: Recommended in confined spaces.
Protective Gloves and/or Clothing: gloves recommended.

SECTION IX - SPECIAL PRECAUTIONS:

Precautions to be taken in storage and handling: Keep container tightly closed when not in use. Store above 35° F.

KEEP OUT OF REACH OF CHILDREN

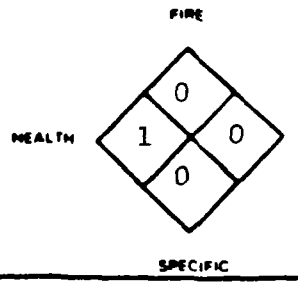
EXHIBIT "A"-34

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

HAZARD RATING
4 = EXTREME
3 = HIGH
2 = MODERATE
1 = SLIGHT
0 = INSIGNIFICANT

NFPA Designation 704



SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL COMPANY, INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS Carpet Pre-Spotter	TRADE NAME AND SYNONYMS Lamco STINGER
CHEMICAL FAMILY liquid detergent	FORMULA

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Ethylene Glycol Butyl Ether CAS #111-76-2	8.2	25 ppm
Isopropyl Alcohol CAS #67-63-0	4.65	400 ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	N.A.	SPECIFIC GRAVITY (H_2O=1)	1.042
VAPOR PRESSURE (mm Hg.)	N.A.	PERCENT, VOLATILE BY VOLUME (%)	89
VAPOR DENSITY (AIR=1)	N.A.	EVAPORATION RATE (_____ =1)	slower than ether
SOLUBILITY IN WATER	complete	pH	12.8
APPEARANCE AND ODOR	reddish/amber	light cherry-almond fragrance	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) Tag Closed Cup none to boiling point 200° F.+	FLAMMABLE LIMITS	Lel	Uel

EXTINGUISHING MEDIA
water

SPECIAL FIRE FIGHTING PROCEDURES
none

UNUSUAL FIRE AND EXPLOSION HAZARDS
none

(Continued on reverse side)

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
See Section II

EFFECTS OF OVEREXPOSURE
May cause eye or skin irritation. (See Section IX below.)

EMERGENCY AND FIRST AID PROCEDURES
Eyes: Flush with water and irrigate for 15 minutes. Get medical attention. Skin: Wash with warm water. If irritation persists, get medical attention. Ingestion: Give large amounts of fluids; citrus juice or milk preferable. Get medical attention.

SECTION VI - REACTIVITY DATA

STABILITY	**UNSTABLE**		**CONDITIONS TO AVOID**
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	**MAY OCCUR**		**CONDITIONS TO AVOID**
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Normal procedure for spillage of liquid soaps. Flush with water.

WASTE DISPOSAL METHOD
Flush to sewer if local ordinance permits. Otherwise bury in local sanitary fill approved by local, state and federal authorities as a disposal site.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*

VENTILATION	**LOCAL EXHAUST**	**SPECIAL**
	MECHANICAL *(General)*	**OTHER**

PROTECTIVE GLOVES recommended	**EYE PROTECTION** goggles recommended

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Avoid continued and/or excessive exposure to skin without wearing protective gloves. Avoid splashing into face -- particularly eyes -- as product is a strong detergent and excessive skin or eye contact may cause irritation.

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form
Form Approved
OMB No. 1218-0072

HAZARD RATING
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SIGNIFICANT
SECTION VI

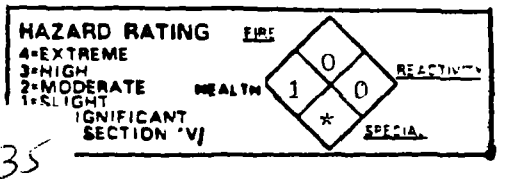

EXHIBIT "A"- 35

IDENTITY (As Used on Label and List) LAMCO TRADE WINDS	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name LAMCO CHEMICAL COMPANY, INC.	Emergency Telephone Number (617) 884-8470
Address (Number, Street, City, State, and ZIP Code) 212 Arlington Street	Telephone Number for Information same, or local Poison Center
CHELSEA, MA 02150	Date Prepared November 10, 1987
	Signature of Preparer (optional) George G. Cramer

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
2-Butoxy Ethanol (Ethylene Glycol Butyl Ether)	25 ppm	50 ppm	N.A.	2.5- 3%

Section III — Physical/Chemical Characteristics

Boiling Point	212° F	Specific Gravity (H_2O = 1)	1.04
Vapor Pressure (mm Hg)	ca. water	Melting Point	N.A.
Vapor Density (AIR = 1)	ca. water	Evaporation Rate (Butyl Acetate = 1) slower than ether	
Solubility in Water complete		pH 12.4	
Appearance and Odor COLOR: Redish-amber		ODOR: Fruity	

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used) None to boiling 200°F + (TCC)	Flammable Limits None determined	LEL N.A.	UEL N.A.
Extinguishing Media Water			
Special Fire Fighting Procedures None			
Unusual Fire and Explosion Hazards None			

Disclaimer of Liability
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Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Do not mix with anything but water

Incompatibility (*Materials to Avoid*) Concentrated or strong oxidizing agents.

Hazardous Decomposition or Byproducts Possibly some carbon monoxide

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	Excessive heat.

Section VI — Health Hazard Data

Route(s) of Entry Inhalation? X Skin? X Ingestion? X

Health Hazards (*Acute and Chronic*) Acute: Possible irritation of skin or respiratory system.

Chronic: No chronic data presently available.

Carcinogenicity NTP? No IARC Monographs? No OSHA Regulated? No

Signs and Symptoms of Exposure Irritation of skin, eyes or respiratory system. Excessive inhalation: Could possibly cause headache and nausea.

Medical Conditions Generally Aggravated by Exposure May further aggravate existing skin disorders and/or respiratory ailments.

Emergency and First Aid Procedures EYES: irrigate with water for at least 15 minutes. If irritation persists seek medical attention. SKIN: Wash with water; if irritation persists get medical attention. INGESTION: Give large amounts of fluids, water or milk to dilute. GET IMMEDIATE MEDICAL ATTENTION. INHALATION: Move subject to fresh air; if nausea persists get medical attention.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled Contain spill. Mop up or wet vacuum, then rinse contaminated area with water. Product is infinitely soluble with water. Once more mop up or pick up liquid, this time to reduce slip hazard. Do not allow normal foot traffic on area until dry.

Waste Disposal Method Comply with all local, state & federal regulations. Solutions with pH of 12.5 or higher should NOT be discharged into sewers until pH has been reduced. Neutralization with acids or large amounts of water will accomplish this. If water is used, dilute each unspent part of product with at least 10 parts of water. Then IF local ordinances permit, flush into sewer. Otherwise collect material with suitable absorbent (sand, earth etc.) and bury in approved landfill.

Precautions to Be Taken in Handling and Storing (and/or Other Precautions) Keep container closed when not in use. Avoid continued and/or excessive exposure to skin without wearing protective gloves. Avoid splashing into face, particularly eyes, as product is a strong detergent and excessive skin contact or eye contact may cause irritation. As with all cleaning products, KEEP OUT OF REACH OF CHILDREN.

Section VIII — Control Measures

Respiratory Protection (*Specify Type*)
None required in normal ventilated areas. In confined spaces, self contained breathing apparatus may be advisable.

Ventilation	Local Exhaust N.A.	Special	N.A.
	Mechanical (*General*) Adequate	Other	N.A.

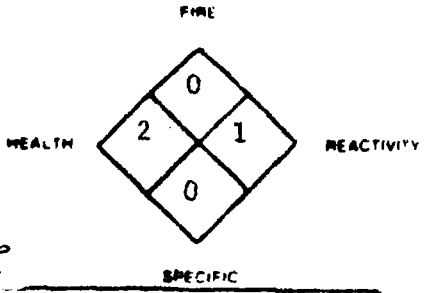
Protective Gloves Rubber or latex gloves recommended. Eye Protection Goggles or face shield recommended.

Other Protective Clothing or Equipment Normally not required.

Work/Hygienic Practices Good housekeeping practices apply.

• USGPO 1986-491-529/45775

NFPA Designation 704



U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

HAZARD RATING
4 = EXTREME
3 = HIGH
2 = MODERATE
1 = SLIGHT

EXHIBIT "A"- 36

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL CO., INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS Ammonium Hydroxide	TRADE NAME AND SYNONYMS Ammonia
CHEMICAL FAMILY Inorganic Basis	FORMULA NH_3 in solution (NH_4OH)

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Ammonia CAS #7664-41-7	6.3	50
		ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	85	SPECIFIC GRAVITY (H_2O=1)	.975
VAPOR PRESSURE (mm Hg.)		PERCENT, VOLATILE BY VOLUME (%)	93.7
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____=1)	slower than ether
SOLUBILITY IN WATER	complete		

APPEARANCE AND ODOR Colorless liquid -- characteristic ammonia odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
none	ammonia vapor		

EXTINGUISHING MEDIA

SPECIAL FIRE FIGHTING PROCEDURES
non-flammable under usual conditions

UNUSUAL FIRE AND EXPLOSION HAZARDS

(Continued on reverse side)

SEP 7 1984

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

HAZARD RATING
4 = EXTREME
3 = HIGH
2 = MODERATE
1 = SLIGHT

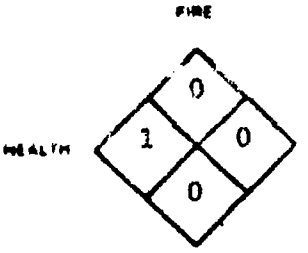


EXHIBIT "A"-37

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL COMPANY, INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS potassium soap	TRADE NAME AND SYNONYMS Super Stripper
CHEMICAL FAMILY anionia	FORMULA

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Ethanolamine CAS #141-43-5	2.7	3 ppm
Ethylene Glycol Monobutyl Ether CAS #111-76-2	1.35	50 ppm
Isopropyl Alcohol CAS #67-63-0	1.2	400 ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	N.A.	SPECIFIC GRAVITY (H_2O=1)	1.010
VAPOR PRESSURE (mm Hg.)	N.A.	PERCENT, VOLATILE BY VOLUME (%)	84
VAPOR DENSITY (AIR=1)	N.A.	EVAPORATION RATE (_____ =1)	slower than ether
SOLUBILITY IN WATER	complete	pH	11.2
APPEARANCE AND ODOR	Color: amber	Odor: pleasant	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) Tag Closed Cup none to boiling point 200° F. +	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA water			
SPECIAL FIRE FIGHTING PROCEDURES none			
UNUSUAL FIRE AND EXPLOSION HAZARDS none			

(Continued on reverse side)

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

Revision 4-16-86

HAZARD RATING
4 = EXTREME
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2 = MODERATE
1 = SLIGHT

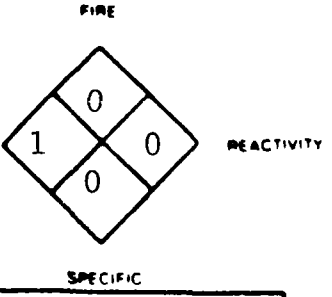


EXHIBIT "A"-38

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL COMPANY, INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS LAMCO MINT DEODORANT CLEANER
CHEMICAL FAMILY Buffered Soap (Liquid Detergent)	FORMULA N.A.

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS N.A.			BASE METAL N.A.		
CATALYST N.A.			ALLOYS N.A.		
VEHICLE N.A.			METALLIC COATINGS N.A.		
SOLVENTS N.A.			FILLER METAL PLUS COATING OR CORE FLUX N.A.		
ADDITIVES N.A.			OTHERS N.A.		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Isopropyl Alcohol CAS #67-63-0	10	400 ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)		212	SPECIFIC GRAVITY (H_2O=1)	0.986
VAPOR PRESSURE (mm Hg.)	estim.	20 mm	PERCENT, VOLATILE BY VOLUME (%)	85
VAPOR DENSITY (AIR=1)	estim.	1.5	EVAPORATION RATE (_____ =1)	slower than ether
SOLUBILITY IN WATER		complete	pH	10.4
APPEARANCE AND ODOR	light green---mint odor.			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
Tag Closed Cup none to boiling point 200° F.+			

EXTINGUISHING MEDIA
water

SPECIAL FIRE FIGHTING PROCEDURES
N.A.

UNUSUAL FIRE AND EXPLOSION HAZARDS
none

(Continued on reverse side)

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
See Section II

EFFECTS OF OVEREXPOSURE
May cause eye and skin irritation.

EMERGENCY AND FIRST AID PROCEDURES
Contains: isopropyl alcohol, soap, pine oil and methyl salicylate. If swallowed or ingested, call physician. Eyes: Flush with water and irrigate for 15 minutes. Get medical attention.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Flush with water if possible or allow to dry and scrape up residue; spilled material may also be absorbed in sand or other inert material.

WASTE DISPOSAL METHOD
If material is diluted with water, flush to sewer if local ordinance permits. Otherwise, use sanitary land fill approved by local, state and federal authorities as a disposal site.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
If used with normal ventilation, none required

VENTILATION	LOCAL EXHAUST (Only if product is used in)	SPECIAL
	MECHANICAL *(General)* confined area.)	OTHER

PROTECTIVE GLOVES
Recommended

EYE PROTECTION
Recommended

OTHER PROTECTIVE EQUIPMENT
None required.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Do not splash into eyes.

OTHER PRECAUTIONS
Keep out of reach of children.

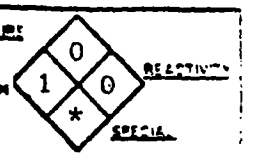
Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

EXHIBIT "A"-39

HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
0=INSIGNIFICANT
SEE SECTION VI



IDENTITY (As Used on Label and List)	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.
LANCO FORMULA 4x2 SPECIAL CLEANER	

Section I

Manufacturer's Name: LANCO CHEMICAL CO. INC.,	Emergency Telephone Number: (617) 884-8470 **
Address (Number, Street, City, State, and ZIP Code): 212 Arlington Street	Telephone Number for Information: same ** Or Local Poison Center
CHELSEA, MA 02150	Date Prepared: July 22, 1987
	Signature of Preparer (optional): Geoffrey Cleaver

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Components not classified hazardous by nature or composition				

Section III — Physical/Chemical Characteristics

Boiling Point	212 ° F	Specific Gravity (H_2O = 1)	1.005
Vapor Pressure (mm Hg)	ca. water	Melting Point	N.A.
Vapor Density (AIR = 1)	ca. water	Evaporation Rate (Butyl Acetate = 1)	slower than ether
Solubility in Water: complete			
Appearance and Odor: Amber liquid - slight pine odor		pH 11.4	

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
TCC. - None to boiling 200° F plus	none determined	N.A.	N.A.

Extinguishing Media: Water

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

Disclaimer of Liability

As conditions or methods of use are beyond our control, we do not assume any responsibilities and expressly disclaim any liability for use of the material. The information contained herein is based on the data available to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Do not mix with anything but water.

Incompatibility (*Materials to Avoid*) Strong acids and/or concentrated oxidizers

Hazardous Decomposition or Byproducts Possibly carbon monoxide

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	Excessive heat

Section VI — Health Hazard Data

Route(s) of Entry Inhalation? X Skin? X Ingestion? X

Health Hazards (*Acute and Chronic*) Acute: Possible irritation of skin or respiratory system.

Chronic: No chronic data presently available.

Carcinogenicity NTP? No IARC Monographs? No OSHA Regulated? No

Signs and Symptoms of Exposure Irritation of skin, eyes or respiratory system. Excessive inhalation: Could possibly cause headache and nausea.

Medical Conditions
Generally Aggravated by Exposure May further aggravate existing skin disorders and/or respiratory ailments.

Emergency and First Aid Procedures EYES: irrigate with water for at least 15 minutes. If irritation persists seek medical attention. SKIN: Wash with water; if irritation persists get medical attention. INGESTION: Give large amounts of fluids, water or milk to dilute. GET IMMEDIATE MEDICAL ATTENTION. INHALATION: Move subject to fresh air; if nausea persists get medical attention.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled Contain spill. Mop up or wet vacuum, then rinse contaminated area with water. Product is infinitely soluble with water. Once more mop up or pick up liquid, this time to reduce slip hazard. Do not allow normal foot traffic on area until dry.

Waste Disposal Method Comply with all local, state and federal regulations. If local ordinances allow sewer disposal, dilute material with large amounts of water prior to disposal. Otherwise collect product and dispose of in approved sites or landfill.

Precautions to Be Taken in Handling and Storing (*and/or Other Precautions*) Keep container closed when not in use. Avoid continued and/or excessive exposure to skin without wearing protective gloves. Avoid splashing into face, particularly eyes, as product is a strong detergent and excessive skin contact or eye contact may cause irritation. As with all cleaning products, KEEP OUT OF REACH OF CHILDREN.

Section VIII — Control Measures

Respiratory Protection (*Specify Type*)
None required in normal ventilated areas. In confined spaces, self contained breathing apparatus may be advisable.

Ventilation	Local Exhaust N.A.	Special	N.A.
	Mechanical (*General*) Adequate	Other	N.A.

Protective Gloves Rubber or latex gloves recommended. Eye Protection Goggles or face shield recommended.

Other Protective Clothing or Equipment Normally not required.

Work/Hygienic Practices Good housekeeping practices apply.

Material Safety Data Sheet
May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
0=INSIGNIFICANT
SECTION VI

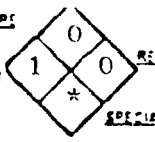


EXHIBIT "A"-40

IDENTITY (As Used on Label and List)	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.
LAMCO "FLOOR CONDITIONER"	

Section I

Manufacturer's Name: LAMCO CHEMICAL CO. INC.,	Emergency Telephone Number: (617) 884-8470 **
Address (Number, Street, City, State, and ZIP Code): 212 Arlington Street	Telephone Number for Information: Same ** Or Local Poison Center
CHELSEA, MA 02150	Date Prepared: July 21, 1987
	Signature of Preparer (optional): George C. Cramm

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Components not classified hazardous by nature or concentration.				

Section III — Physical/Chemical Characteristics

Boiling Point	212° F	Specific Gravity (H_2O = 1)	1.04
Vapor Pressure (mm Hg)	ca. water	Melting Point	N.A.
Vapor Density (AIR = 1)	ca. water	Evaporation Rate (Butyl Acetate = 1) slower than ether.	
Solubility in Water: complete			
Appearance and Odor: Off white liquid - no specific odor		pH 10.2	

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
TCC.- None to boiling 200° F plus.	none determined	N.A.	N.A.

Extinguishing Media: Water

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

Disclaimer of Liability
As conditions or methods of use are beyond our control, we do not assume any responsibilities and expressly disclaim any liability for use of the material. The information contained herein is based on the data available to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

(Reproduce locally)

OSHA 174, Sept 1985
modified

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Do not mix with anything but water

Incompatibility (*Materials to Avoid*) Concentrated or strong oxidizing agents

Hazardous Decomposition or Byproducts None known

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	N.A.

Section VI — Health Hazard Data

Route(s) of Entry Inhalation? X Skin? X Ingestion? X

Health Hazards (*Acute and Chronic*) Acute: May cause nausea or headache in rare cases.

Chronic: No chronic data presently available.

Carcinogenicity NTP? No IARC Monographs? No OSHA Regulated? No

Signs and Symptoms of Exposure Could cause nausea and/or headache in rare cases. If splashed into eyes would cause eye irritation. Could be irritating to skin upon repeated and prolonged contact.

Medical Conditions Generally Aggravated by Exposure None known

Emergency and First Aid Procedures INHALATION: Move subject to fresh air. EYE and SKIN contact: Flush eyes with large amounts of water for at least 15 minutes. If irritation persists get medical attention. Skin: wash affected areas with soap and water. INGESTION: Administer water or milk to dilute. GET IMMEDIATE MEDICAL ATTENTION.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled Keep spectators away, floor may be slippery. SMALL SPILLS: Mop up or wet vacuum; let area dry. LARGE SPILLS: Dike and contain with inert material (sand earth, etc.) and transfer to separate containers for disposal.

Waste Disposal Method Comply with all local, state and federal regulations. If local ordinances allow sewer disposal, dilute material with large amounts of water prior to disposal. Otherwise collect the product with the aid of inert material and dispose of in approved sites or landfill

Precautions to Be Taken in Handling and Storing (*and/or Other Precautions*)

Keep containers closed when not in use. KEEP OUT OF REACH OF CHILDREN

Section VIII — Control Measures

Respiratory Protection (*Specify Type*) None required if good and normal ventilation is maintained.

Ventilation	Local Exhaust N.A.	Special N.A.	
	Mechanical (*General*) Adaquate	Other N.A.	

Protective Gloves Normally not required Eye Protection recommended

Other Protective Clothing or Equipment Normally not needed

Work/Hygienic Practices Good housekeeping practices apply.

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
0=INSIGNIFICANT
FIRE 0 HEALTH 1 REACTIVITY 0 SPECIAL *
SECTION VI

EXHIBIT "A"- 41

IDENTITY (As Used on Label and List)
LAMCO ALL SURFACE CLEANER

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name: LAMCO CHEMICAL CO. INC.,	Emergency Telephone Number: (617) 884-8470
Address (Number, Street, City, State, and ZIP Code): 212 Arlington Street	Telephone Number for Information: (617) 884 - 8470
Chelsea, MA 02150	Date Prepared: June 22, 1987
	Signature of Preparer (optional): George G. Cleaves

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Isopropyl Alcohol CAS # 67-63-0	400 ppm	500 ppm	N.A.	5 - 7%

Section III — Physical/Chemical Characteristics

Boiling Point	212° F	Specific Gravity (H_2O = 1)	.985
Vapor Pressure (mm Hg)	ca. water	Melting Point	N.A.
Vapor Density (AIR = 1)	ca. water	Evaporation Rate (Butyl Acetate = 1)	slower than ether
Solubility in Water	Complete		
Appearance and Odor	Light tan liquid, slight pine odor	pH 8.4 - 8.8	

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
TCC None to boiling 200° F +	None determined	N.A	N.A.

Extinguishing Media: Water

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

Disclaimer of Liability

As conditions or methods of use are beyond our control, we do not assume any responsibilities and expressly disclaim any liability for use of the material. The information contained herein is based on the data available to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Do not mix with anything but water.

Incompatibility (*Materials to Avoid*) Strong acids and concentrated oxidizers

Hazardous Decomposition or Byproducts Possibly some carbon monoxide

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	Excessive heat

Section VI — Health Hazard Data

Route(s) of Entry Inhalation? X Skin? X Ingestion? X

Health Hazards (*Acute and Chronic*) Acute: May cause nausea and headaches in rare cases.

Chronic: No chronic data presently available.

Carcinogenicity NTP? No IARC Monographs? NO OSHA Regulated? No

Signs and Symptoms of Exposure Could cause nausea in rare cases. If splashed into eyes would cause eye irritation.

Medical Conditions Generally Aggravated by Exposure None known

Emergency and First Aid Procedures INHALATION:(Excessive) - Move subject to fresh air.
EYES: Flush with water for at least 15 minutes. If irritation persists get medical attention.
INGESTION: Administer water or milk to dilute. GET IMMEDIATE MEDICAL ATTENTION.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled Keep spectators away, floor may be slippery. SMALL SPILLS: Mop up or wet vacuum. Then wash area with water to remove all traces of soap. LARGE SPILLS:Dike and contain with inert material (sand, earth, etc.) and transfer to separate container for disposal.

Waste Disposal Method This is a mild, biodegradable vegetable oil soap. If local ordinances permit, flush into sewer. (Prior to this disposal dilute product with water). Otherwise absorb with inert material, collect in a separate containers and bury in approved landfill.

Precautions to Be Taken in Handling and Storing (*and/or* Other Precautions)

Normally none required. Keep containers closed when not in use.
Do not splash into eyes. KEEP OUT OF REACH OF CHILDREN.

Section VIII — Control Measures

Respiratory Protection (*Specify Type*) None required if good ventilation is maintained.

Ventilation	Local Exhaust	N.A.	Special	N.A.
	Mechanical (General)	Adequate	Other	N.A.
Protective Gloves	Normally not needed		Eye Protection	recommended but not necessary

Other Protective Clothing or Equipment Normally not needed

Work/Hygienic Practices Good housekeeping practices apply.

• USGPO 1986-491-529/45775

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Revised Sept. 1986

MATERIAL SAFETY DATA SHEET

HAZARD RATING
4 = EXTREME
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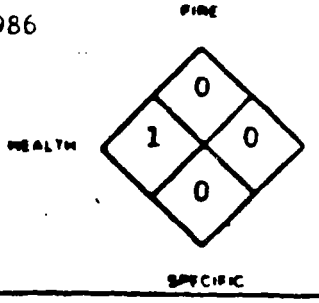


EXHIBIT "A"-42

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL COMPANY, INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS potassium soap	TRADE NAME AND SYNONYMS WAX & DIRT REMOVER
CHEMICAL FAMILY Anionic Detergent.	FORMULA Formulated Product

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS N.A.			BASE METAL N.A.		
CATALYST N.A.			ALLOYS N.A.		
VEHICLE N.A.			METALLIC COATINGS N.A.		
SOLVENTS N.A.			FILLER METAL PLUS COATING OR CORE FLUX N.A.		
ADDITIVES N.A.			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Ethanolamine CAS #141-43-5	3	3 ppm

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	212°	SPECIFIC GRAVITY (H_2O=1)	1.010
VAPOR PRESSURE (mm Hg.)	ca. water	PERCENT, VOLATILE BY VOLUME (%)	84
VAPOR DENSITY (AIR=1)	ca. water	EVAPORATION RATE (_____ =1)	slower than ether
SOLUBILITY IN WATER	complete	pH	11.2
APPEARANCE AND ODOR	Color: amber	Odor: pleasant	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	LEL	UEL
Tag Closed Cup none to boiling point 200° F. +	none determined		

EXTINGUISHING MEDIA
water

SPECIAL FIRE FIGHTING PROCEDURES
none

UNUSUAL FIRE AND EXPLOSION HAZARDS
none

(Continued on reverse side)

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
See Section II

EFFECTS OF OVEREXPOSURE
May cause eye and skin irritation.

EMERGENCY AND FIRST AID PROCEDURES
Eyes: Flush with water and irrigate for 15 minutes. Get medical attention.
Skin: Wash with warm water.

SECTION VI - REACTIVITY DATA

STABILITY	**UNSTABLE**		**CONDITIONS TO AVOID**
	STABLE	X	Do not mix with anything but water

INCOMPATABILITY *(Materials to avoid)*
concentrated oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS Possibly some CO

HAZARDOUS POLYMERIZATION	**MAY OCCUR**		**CONDITIONS TO AVOID**
	WILL NOT OCCUR	X	Excessive Heat

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Flush with water if possible or allow to dry and scrape up residue; spilled material may also be absorbed in sand or other inert material.

WASTE DISPOSAL METHOD

If material is diluted with water, flush to sewer if local ordinance permits. Otherwise use sanitary land fill approved by local, state and federal authorities as a disposal site.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)* Normally none required

VENTILATION	**LOCAL EXHAUST** Not required		**SPECIAL**
	MECHANICAL *(General)* Recommended		**OTHER**

PROTECTIVE GLOVES recommended

EYE PROTECTION goggles recommended

OTHER PROTECTIVE EQUIPMENT Not required

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Avoid continued and/or excessive exposure to skin without wearing protective gloves. Avoid splashing into face, particularly eyes, as product is a strong soap and direct eye contact would cause eye irritation.

OTHER PRECAUTIONS

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

HAZARD RATING
4-EXTREME
3-HIGH
2-MODERATE
1-LIGHT
0-INSIGNIFICANT
(SECTION VI)

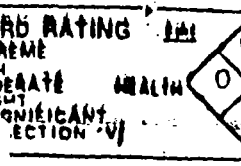


EXHIBIT "A"-43

IDENTITY (As Used on Label and List)	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.
LAMCO ALL PURPOSE CLEANER	

Section I

Manufacturer's Name: LAMCO CHEMICAL CO. INC.,	Emergency Telephone Number: (617) 884-8470
Address (Number, Street, City, State, and ZIP Code): 212 Arlington Street	Telephone Number for Information: Or Local Poison Center:
CHELSEA, MA 02150	Date Prepared: October 24, 1989
	Signature of Preparer (optional):

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
none				

Section III — Physical/Chemical Characteristics

Boiling Point	212° F	Specific Gravity (H_2O = 1)	1.00
Vapor Pressure (mm Hg)	ca.water	Melting Point	N.A.
Vapor Density (AIR = 1)	ca.water	Evaporation Rate (Butyl Acetate = 1)	slower than ether

Solubility in Water: Complete

Appearance and Odor: Light tan liquid, slight pine ordor

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
TCC None to boiling 200°F +	none determined	N.A.	N.A.

Extinguishing Media: Water

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

Disclaimer of Liability
As conditions or methods of use are beyond our control, we do not assume any responsibilities and expressly disclaim any liability for use of the material. The information contained herein is based on the data available to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

(Reproduce locally)

OSHA 174, Sept. 1985
modified

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Do not mix with anything but water.

Incompatibility (*Materials to Avoid*): Strong acids and concentrated oxidizers.

Hazardous Decomposition or Byproducts: Possibly some carbon monoxide.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	Excessive heat

Section VI — Health Hazard Data

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
	X	X	X

Health Hazards (*Acute and Chronic*): Chronic: No chronic data presently available.

Carcinogenicity	NTP?	IARC Monographs?	OSHA Regulated?
No	No	No	No

Signs and Symptoms of Exposure: If splashed into eyes, would cause slight eye irritation.

Medical Conditions Generally Aggravated by Exposure: None known

Emergency and First Aid Procedures

EYES: Flush with water for at least 15 minutes. If irritation persists, get medical attention.
INGESTION: Administer water or milk to dilute. Get medical attention.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled: Keep spectators away, floor may be slippery. SMALL SPILLS: Mop up or wet vacuum. Then wash area with water to remove all traces of soap. LARGE SPILLS: Dike and contain with inert material (sand, earth, etc.) and transfer to separate container for disposal.

Waste Disposal Method: This is a mild, biodegradable vegetable oil soap. If local ordinances permit, flush into sewer. Otherwise absorb with inert material, collect in a separate container and bury in approved landfill.

Precautions to Be Taken in Handling and Storing (*and/or Other Precautions*)

Normally none required. Keep containers closed when not in use. Do not splash into eyes. KEEP OUT OF THE REACH OF CHILDREN. If used by children, insure adult supervision.

Section VIII — Control Measures

Respiratory Protection (*Specify Type*): None required if good ventilation is maintained.

Ventilation	Local Exhaust	N.A.	Special	N.A.
	Mechanical (*General*)	Adequate	Other	N.A.

Protective Gloves: normally not needed	Eye Protection: recommended by not necessary

Other Protective Clothing or Equipment: normally not needed

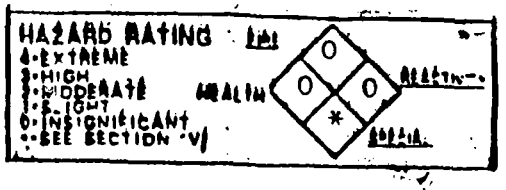
Work/Hygienic Practices: Good housekeeping practices apply.

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

HAZARD RATING
4-EXTREME
3-HIGH
2-MODERATE
1-SLIGHT
0-INSIGNIFICANT
*-SEE SECTION VI



IDENTITY (As Used on Label and List)	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.
LAMCO ALL PURPOSE CLEANER	

Section I

Manufacturer's Name: LAMCO CHEMICAL CO. INC.,	Emergency Telephone Number: (617) 884-8470
Address (Number, Street, City, State, and ZIP Code): 212 Arlington Street	Telephone Number for Information: Or Local Poison Center
CHELSEA, MA 02150	Date Prepared: October 24, 1989
	Signature of Preparer (optional):

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
none				

Section III — Physical/Chemical Characteristics

Boiling Point	212° F	Specific Gravity (H_2O = 1)	1.00
Vapor Pressure (mm Hg)	ca.water	Melting Point	N.A.
Vapor Density (AIR = 1)	ca.water	Evaporation Rate (Butyl Acetate = 1)	slower than ether

Solubility in Water: Complete

Appearance and Odor: Light tan liquid, slight pine ordor pH 7.5

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
TCC None to boiling 200°F +	none determined	N.A.	N.A.

Extinguishing Media: Water

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

Disclaimer of Liability
As conditions or methods of use are beyond our control, we do not assume any responsibilities and expressly disclaim any liability for use of the material. The information contained herein is based on the data available to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

(Reproduce locally)

OSHA 174, Sept. 1985
modified

SEP 19 19

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

MATERIAL SAFETY DATA SHEET

HAZARD RATING
4 = EXTREME
3 = HIGH
2 = MODERATE
1 = SLIGHT
0 = INSIGNIFICANT

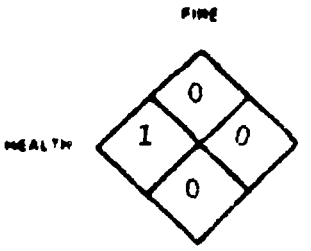


EXHIBIT "A"- 44

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
LAMCO CHEMICAL COMPANY, INC.	(617) 884-8470
ADDRESS (Number, Street, City, State, and ZIP Code) 212 Arlington Street, Chelsea, MA 02150	
CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS Lamco Blue Label Institutional
CHEMICAL FAMILY	FORMULA Floor Wax

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Does not contain hazardous substances in reportable quantities.		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.) water	212	SPECIFIC GRAVITY (H_2O=1)	1.016
VAPOR PRESSURE (mm Hg.)	water	PERCENT, VOLATILE BY VOLUME (%)	86
VAPOR DENSITY (AIR=1)	water	EVAPORATION RATE (_____ =1) slower than ether	
SOLUBILITY IN WATER	complete	pH	9.2
APPEARANCE AND ODOR Color: tan		Odor: mild	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) Tag Closed Cup	FLAMMABLE LIMITS	Lel	Uel
none to boiling point 2000 F. +			

EXTINGUISHING MEDIA
water

SPECIAL FIRE FIGHTING PROCEDURES
none

UNUSUAL FIRE AND EXPLOSION HAZARDS
none

(Continued on reverse side)

EXHIBIT "B"- 1

HERCULES INCORPORATED
Hercules Plaza
Wilmington, DE 19894
Phone #: (302) 594-5000 (24 hrs)

15, 25, 25A, 45A and WCFA Tall-oils

EXHIBIT tabbies B(2)

MSDS No.: 676 4013 0100-04

Supersedes MSDS #: 676 4013 0100-03 Date: 04/24/92

not on F list

I. PRODUCT IDENTIFICATION

PAMAK* 15, 25, 25A, 45A and WCFA Tall-oils (2)

CASRN: 8002-26-4

HMIS RATINGS:(1)

Health hazard:	0	Minimal
Flammability hazard:	1	Slight
Reactivity hazard:	0	Minimal

CHEMICAL & COMMON NAME: Tall-oil distillation fractions

APPEARANCE AND ODOR: Pale amber, oily liquid; fatty odor

(2) These products are composed of fatty acids and resin (rosin) acids. The fatty acids are primarily straight chain, 18-carbon mono- and di-unsaturated acids, including oleic and linoleic acid.

* Registered trademark of Hercules Incorporated

(1)*Explanation of acronyms:*
HMIS: Hazardous Materials Identification System rating for product as supplied.
CASRN: Chemical Abstract Substance Registry Number
AIHA WEEL: American Industrial Hygienists Association - Workplace Environmental Exposure Level.
OSHA: Occupational Safety and Health Administration.
TLV: Registered trademark of American Conference of Governmental Industrial Hygienists for Threshold Limit Values.
TWA: Time Weighted Average
STEL: Short term exposure limit (See 29 CFR 1910.1048, March 1, 1989, revision)
C: Ceiling exposure concentration (See 29 CFR 1910.1000, March 1, 1989, rev.)
SKIN: May be absorbed through skin (See 29 CFR 1910.1048, March 1, 1989, rev.)
N/A: Not applicable

V. HEALTH HAZARD DATA

...Continued

CANCER INFORMATION:

The components of this product are NOT listed as carcinogens by the National Toxicology Program (NTP). They are NOT regulated as carcinogens by the Occupational Safety and Health Administration (OSHA) and have NOT been evaluated by the International Agency for Research on Cancer (IARC).

REPORTED HUMAN EFFECTS:

These PAMAK* products consist primarily of tall oil derived fatty acids, mainly oleic and linoleic acid. Some of these fatty acids are common components of the human diet. These products also contain varying amounts of resin (rosin) acids.

Tall oil acids are approved for use as an indirect food additive. Liquid soap formulations containing up to 12% tall oil fatty acids did not cause dermal irritation, sensitization or photosensitization in human subjects.

LINOLEIC ACID: In a dietary study in humans, ingestion of large amounts of linoleic acid caused changes in platelet functions (decreased platelet activation).

OLEIC ACID: None reported

RESIN (ROSIN) ACIDS: See above: MEDICAL CONDITIONS GENERALLY RECOGNIZED AS BEING AGGRAVATED BY EXPOSURE.

Prolonged exposure to smoke or fumes generated by heating this product may cause respiratory irritation with throat discomfort, coughing or breathing difficulty. Repeated exposure may lead to respiratory sensitization (asthma). See SECTION II

REPORTED ANIMAL EFFECTS:

Tall oil fatty acids fed to rats for forty days at a level of 6% in the diet had no adverse effects. Rats fed levels of 12% and 24% had reduced growth. No treatment-related effects were seen in a two-generation reproduction study in rats fed diets containing 5% and 10% tall oil fatty acids.

A 90-day dietary study with rats fed diets containing up to 25% of a material containing many of the components of products revealed no ill effects that could be related to the test material.

LINOLEIC ACID: Oral LD50, mouse - greater than 3200 mg/kg.
Oral LD50, rat - greater than 3200 mg/kg.
Dermal LD50, guinea pig - greater than 20 ml/kg.

Linoleic acid was non-toxic by single peroral administration to rats and not an irritant to rabbit eyes or skin.

Continued...

V. HEALTH HAZARD DATA

REPORTED ANIMAL EFFECTS:...Continued

OLEIC ACID: Oleic acid was non-toxic by peroral administration, non-corrosive (4-hour patch test), not a skin irritant, and not an eye irritant. Oleic acid fed to rats for three months at concentrations up to 25% in the diet produced no adverse effects. The no-effect level was greater than 28 g/kg/day, the calculated equivalent of 25% dietary oleic acid.

RESIN (ROSIN) ACIDS: These products contain up to 50% resin (rosin) acids. Two-year feeding studies have been conducted in dogs and rats with rosin. At a dietary level of 1% rosin, the rats showed a slight decrease in body weight gain and both species showed increased liver sizes. Microscopic examination of the liver and other tissues did not reveal any abnormalities that could be attributed to the test material. At dietary levels of 0.2% or less, the rats and dogs did not have any abnormalities that could be related to the resin (rosin) acids.

OTHER:

Oleic acid caused chromosome aberrations in yeast (Saccharomyces cerevisae) and in cultured hamster fibroblast cells.

VI. SPILL PROCEDURES & WASTE DISPOSAL

SPILL PROCEDURES:

Scrape up and salvage in metal containers. Soak up small spills with earth or sand. Wash area with detergent and water.

WASTE DISPOSAL METHOD:

Incineration of combustible wastes in permitted facilities is the preferred disposal method.

Refer to Section VIII for specific Federal Environmental and Regulatory Data regarding use or disposal of this product.

VII. APPLICABLE CONTROL MEASURES

APPROPRIATE HYGIENIC PRACTICES:

Avoid contact with eyes, skin, and clothing.
Wash thoroughly after handling, and before eating, drinking or smoking.
Remove contaminated clothing promptly and clean thoroughly before reuse.

PERSONAL PROTECTIVE EQUIPMENT:

Impervious gloves
Safety glasses
Appropriate protective clothing

Continued...

VII. APPLICABLE CONTROL MEASURES

...Continued

WORK PRACTICES:

Eyewash fountains and safety showers should be easily accessible.
Spontaneous combustion may occur if rags or trash soaked with this material are confined such as in piles or bins. Soaked vessel or piping insulation may also be subject to spontaneous combustion.

HANDLING AND STORAGE PRECAUTIONS: None

ENGINEERING CONTROLS:

Provide adequate ventilation.

PROTECTIVE MEASURES DURING REPAIR AND MAINTENANCE:

Completely isolate and thoroughly clean all equipment, piping or vessels before beginning maintenance or repairs.
Keep area clean. Product will burn.

VIII. ENVIRONMENTAL REGULATORY DATA

The following environmental and regulatory data are provided to assist users of this product in defining their regulatory environmental compliance obligations.

A. PRODUCT COMPOSITION

PRODUCT (P) or COMPONENT NO.	TRADE NAME or CHEMICAL COMPONENT	CASRN	WT. PERCENT
P	PAMAK* 15, 25, 25A, 45A, and WCFA Tall-oils	8002-26-4	100

B. SARA TITLE III (See footnotes)

COMPONENT NO.	SEC. 304 EHS RQ (lbs)	SEC. 302 EHS TPQ (lbs)	SEC. 311/312 HAZARD CATEGORY	SEC. 313 TOXIC CHEMICAL (YES, NO)
P	N/A	N/A	NHH, NPH	NO

C. CERCLA (40 CFR 302.4 HAZARDOUS SUBSTANCE & REPORTABLE QUANTITIES)

These products do NOT contain any hazardous substances listed in 40 CFR 302.4

D. RCRA INFORMATION

These products are not listed in federal hazardous waste regulation 40 CFR 261.33, paragraph (e) or (f) - i.e., chemical products that are considered hazardous if they become wastes. They do not exhibit any of the hazardous characteristics listed in 40 CFR 261, Subpart C. State or local hazardous waste regulations may apply if they are different from the federal regulation.

E. TSCA STATUS

The components of these products are included on the EPA TSCA Chemical Substance Inventory.

Continued...

VIII. ENVIRONMENTAL REGULATORY DATA

...Continued

FOOTNOTES:

SEC. 302 - Threshold Planning Quantity, Extremely Hazardous Substance (EHS) (40 CFR 355 Emergency Planning and Notification regulations)

N/A: This chemical is not an EHS. Therefore, there is no Threshold Planning Quantity (TPQ).

SEC. 304 - Reportable Quantity for Releases of an EHS (40 CFR 355, Appendix A)

N/A: This chemical is not an EHS. Therefore, there is no Reportable Quantity (RQ).

SEC. 311/312 - 40 CFR 370 Hazardous Chemical Reporting Requirements "Hazard Categories"

HC-1 Immediate (acute) health hazard
HC-2 Delayed (chronic) health hazard
HC-3 Fire hazard
HC-4 Sudden release of pressure hazard
HC-5 Reactive hazard
NHH Not a health hazard
NPH Not a physical hazard

SEC. 313 - 40 CFR 372 Toxic Chemical Release Reporting Requirements

NO: This component is NOT subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 Toxic Chemical Reporting requirements.

YES: This component is subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372 Toxic Chemical Reporting requirements. Percent composition (or estimated range) is listed above.

N/A: This product is a mixture. As such, it is not listed as a Toxic Chemical under 40 CFR 372, Sect. 313 reporting requirements. Reportable constituents are listed individually where they exceed threshold concentration limits.

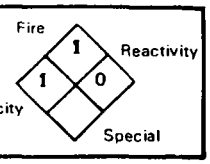
Doc. No. 0754s

Witco MATERIAL SAFETY EXHIBIT "B"-2

PRODUCT INDUSTRENE®226

C.A.S. NO. 67701-08-0

HAZARD RATING (NPA)
4 – EXTREME
3 – HIGH
2 – MODERATE
1 – SLIGHT
0 – INSIGNIFICANT



SECTION I

WITCO MANUFACTURING DIVISION OR SUBSIDIARY
1 HUMKO CHEMICAL

ADDRESS (NUMBER, STREET, CITY, STATE, ZIP CODE)
2 P.O. BOX 125, 1231 POPE STREET, MEMPHIS, TN 38101-108

EMERGENCY TELEPHONE
MANUFACTURER
(901) 320-5800
CHEM TREC 1-(800) 424-9300

CHEMICAL NAME OR FAMILY
3 SOYA FATTY ACIDS

FORMULA
4 MIXTURE

SECTION II – CHEMICAL AND PHYSICAL PROPERTIES

CHEMICAL

HAZARDOUS DECOMPOSITION PRODUCTS
5 CO_2 FROM BURNING

INCOMPATIBILITY (KEEP AWAY FROM)
6 N/A

LIST ALL TOXIC AND HAZARDOUS INGREDIENTS
7 NONE

not on list

PHYSICAL

FORM
8 LIQUID TO PASTE

ODOR
9 MILD-TYPICALLY FATTY

APPEARANCE
10 WAXY

COLOR
11 OFF-WHITE TO LT. TAN

SPECIFIC GRAVITY (WATER = 1)
12 APPROX. 0.875

BOILING PT.
13 ABOVE 260 °C / 500 °F

MELTING PT.
14 APPROX. 25 °C / 77 °F

SOLUBILITY IN WATER
15 AT ____ °C: NEGLIGIBLE

% VOLATILE (BY WT %)
16 NEGLIGIBLE

EVAP. RATE
17 (____ = 1) NEGLIGIBLE

VAPOR PRESSURE (mm Hg at 20 °C)
18 NEGLIGIBLE

VAPOR DENSITY (AIR = 1)
19 NEGLIGIBLE

pH AS IS
20 pH ( )

STRONG ACID ☐
STRONG BASE ☐
STABLE ☒
UNSTABLE ☐
21

VISCOSITY SUS AT 100 °F
22 < 100 ☐ 100 OR > ☐

23 FOR INDUSTRIAL USE ONLY

SECTION III – FIRE AND EXPLOSION DATA

SPECIAL FIRE FIGHTING PROCEDURES
24 DO NOT USE HEAVY STREAM OF WATER AS FATTY MATERIAL WILL FLOAT.

FLASH POINT (METHOD USED)
26 CLOSED CUP APPROX. 174 °C 345 °F

FLAMMABLE LIMITS %
27 NOT AVAILABLE
LOWER ____ UPPER ____

UNUSUAL FIRE AND EXPLOSION HAZARDS
25 ONLY USUAL HAZARDS ASSOCIATED WITH ORGANIC DUSTS WHERE APPLICABLE.

EXTINGUISHING AGENTS
28 ☒ DRYCHEMICAL ☒ CO_2 ☒ WATERSPRAY ☒ FOAM ☒ WATERFOG ☒ SAND/EARTH ☐ OTHER ____

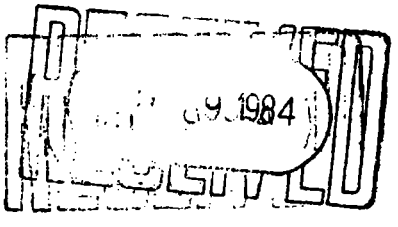
SECTION IV – HEALTH HAZARD DATA

PERMISSIBLE CONCENTRATIONS (AIR)
29 NOT ESTABLISHED

EFFECTS OF OVEREXPOSURE
30 NDA

TOXICOLOGICAL PROPERTIES
31 NDA

EMERGENCY FIRST AID PROCEDURES
32 EYES WASH WITH WATER AND CONTACT PHYSICIAN IMMEDIATELY. .
33 SKIN CONTACT WASH WITH SOAP AND WATER.
34 INHALATION REMOVE TO FRESH AIR.
35 IF SWALLOWED CONTACT PHYSICIAN.



NA = NOT APPLICABLE NDA = NO DATA AVAILABLE < = LESS THAN > = MORE THAN

FORM NO. 851 (4/83)

0031-0108

Witco MATERIAL SAFETY DATA SHEET

PRODUCT INDUSTRENE®226

C.A.S. NO. 67701-08-0

SECTION V – SPECIAL PROTECTION INFORMATION

VENTILATION TYPE REQUIRED (LOCAL, MECHANICAL, SPECIAL) NO SPECIAL VENTILATION NECESSARY UNDER NORMAL CONDITIONS OF USE. LOCAL IF NECESSARY TO CONTROL HEATED FUMES AND/OR VAPORS. (36)	PROTECTIVE GLOVES (38) NEOPRENE TYPE RECOMMENDED
RESPIRATORY PROTECTION (SPECIFY TYPE) USE NIOSH/OSHA APPROVED DUST MASK AND/OR RESPIRATORS WHERE APPROPRIATE. (37)	EYE PROTECTION (39) CHEMICAL SAFETY GLASSES
	OTHER PROTECTIVE EQUIPMENT PROTECTIVE APRON (40) RECOMMENDED

SECTION VI – HANDLING OF SPILLS OR LEAKS

PROCEDURES FOR CLEAN-UP

USE ABSORBENT MATERIAL FOR LIQUIDS AND/OR SCOOP SOLIDS TO DISPOSAL FACILITY. MAYBE INCINERATED OR LANDFILLED. ORDINARY HOUSEKEEPING PROCEDURES ARE ADEQUATE. (41)

WASTE DISPOSAL

DISPOSE OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. (42)

SECTION VII – SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

KEEP CONTAINERS DRY AND CLOSED UNTIL READY FOR USE. PROTECT CONTENTS FROM LONG TERM STORAGE TEMPERATURES ABOVE 125°F TO PROLONG SHELF LIFE. (43)

SECTION VIII – TRANSPORTATION DATA

(44) UNREGULATED BY D.O.T. [X]	U.S. D.O.T. PROPER SHIPPING NAME (47)
(45) REGULATED BY D.O.T [ ]	U.S. D.O.T. HAZARD CLASS (48) / I.D. NUMBER (49)
TRANSPORTATION EMERGENCY INFORMATION CHEM TREC 1-(800) 424-9300 (46)	RQ (50) / LABEL(S) REQUIRED (51) FREIGHT CLASSIFICATION (52) FATTY ACIDS OF VEGETABLE OIL SPECIAL TRANSPORTATION NOTES (53)

RECEIVED OCT 19 1984

SECTION IX – COMMENTS

(54)

SIGNATURE [signature] TITLE BRUCE MOORMAN REGULATORY COMPLIANCE

REVISION DATE JAN. 1, 1984 SENT TO ATTN: _____ DATE _____

SUPERSEDES ALL PREVIOUS

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

0031-0109

Witco MATERIAL SAFETY DATA SHEET

PRODUCT INDUSTRENE®226

C.A.S. NO. 67701-08-0

NFPA: H — G — 4 — 3 — HIGH — 2 — MODERATE — 1 — SLIGHT — 0 — INSIGNIFICANT

Fire 1 · Reactivity · Toxicity 1 · 0 · Special

SECTION I

1 WITCO MANUFACTURING DIVISION OR SUBSIDIARY	HUMKO CHEMICAL
2 ADDRESS (NUMBER, STREET, CITY, STATE, ZIP CODE)	P.O. BOX 125, 1231 POPE STREET, MEMPHIS, TN 38101-108
3 CHEMICAL NAME OR FAMILY	SOYA FATTY ACIDS
4 FORMULA	MIXTURE

EMERGENCY TELEPHONE
MANUFACTURER
(901) 320-5800
CHEM TREC 1-(800) 424-9300

SECTION II — CHEMICAL AND PHYSICAL PROPERTIES

CHEMICAL

5 HAZARDOUS DECOMPOSITION PRODUCTS: CO_2 FROM BURNING

6 INCOMPATIBILITY (KEEP AWAY FROM): N/A

7 LIST ALL TOXIC AND HAZARDOUS INGREDIENTS: NONE

PHYSICAL

8 FORM	LIQUID TO PASTE
9 ODOR	MILD-TYPICALLY FATTY
10 APPEARANCE	WAXY
11 COLOR	OFF-WHITE TO LT. TAN
12 SPECIFIC GRAVITY (WATER = 1)	APPROX. 0.875
13 BOILING PT. ABOVE	260 °C / 500 °F
14 MELTING PT. APPROX.	25 °C / 77 °F
15 SOLUBILITY IN WATER AT ____ °C	NEGLIGIBLE
16 % VOLATILE (BY WT %)	NEGLIGIBLE
17 EVAP. RATE (____ = 1)	NEGLIGIBLE
18 VAPOR PRESSURE (mm Hg at 20 °C)	NEGLIGIBLE
19 VAPOR DENSITY (AIR = 1)	NEGLIGIBLE
20 pH AS IS / pH ( )	____ / ____

21 STRONG ACID ____ ☐
STRONG BASE ____ ☐
STABLE ____ ☒
UNSTABLE ____ ☐

22 VISCOSITY SUS AT 100 °F: <100 ☐ 100 OR > ☐

23 FOR INDUSTRIAL USE ONLY

SECTION III — FIRE AND EXPLOSION DATA

24 SPECIAL FIRE FIGHTING PROCEDURES: DO NOT USE HEAVY STREAM OF WATER AS FATTY MATERIAL WILL FLOAT.

26 FLASH POINT (METHOD USED) CLOSED CUP APPROX. 174 °C 345 °F

27 FLAMMABLE LIMITS % NOT AVAILABLE — LOWER ____ UPPER ____

25 UNUSUAL FIRE AND EXPLOSION HAZARDS: ONLY USUAL HAZARDS ASSOCIATED WITH ORGANIC DUSTS WHERE APPLICABLE.

EXTINGUISHING AGENTS
☒ DRYCHEMICAL ☒ CO_2
☒ WATERSPRAY ☒ FOAM
☒ WATERFOG ☒ SAND/EARTH
28 ☐ OTHER ____

SECTION IV — HEALTH HAZARD DATA

29 PERMISSIBLE CONCENTRATIONS (AIR): NOT ESTABLISHED

30 EFFECTS OF OVEREXPOSURE: NDA

31 TOXICOLOGICAL PROPERTIES: NDA

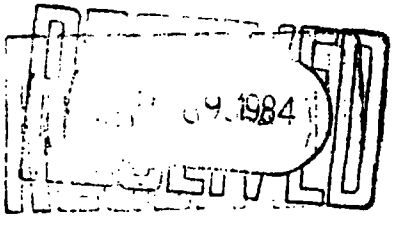
EMERGENCY FIRST AID PROCEDURES

32 EYES: WASH WITH WATER AND CONTACT PHYSICIAN IMMEDIATELY.

33 SKIN CONTACT: WASH WITH SOAP AND WATER.

34 INHALATION: REMOVE TO FRESH AIR.

35 IF SWALLOWED: CONTACT PHYSICIAN.



NA = NOT APPLICABLE NDA = NO DATA AVAILABLE <= LESS THAN >= MORE THAN

0031-0110

FORM NO. 851 (4/83)

Witco MATERIAL SAFETY DATA SHEET

PRODUCT INDUSTRENE®226

C.A.S. NO. 67701-08-0

SECTION V – SPECIAL PROTECTION INFORMATION

VENTILATION TYPE REQUIRED (LOCAL, MECHANICAL, SPECIAL) NO SPECIAL VENTILATION NECESSARY UNDER NORMAL CONDITIONS OF USE. LOCAL IF NECESSARY TO CONTROL HEATED FUMES AND/OR VAPORS. (36)	PROTECTIVE GLOVES (38) NEOPRENE TYPE RECOMMENDED
RESPIRATORY PROTECTION (SPECIFY TYPE) USE NIOSH/OSHA APPROVED DUST MASK AND/OR RESPIRATORS WHERE APPROPRIATE. (37)	EYE PROTECTION (39) CHEMICAL SAFETY GLASSES OTHER PROTECTIVE EQUIPMENT PROTECTIVE APRON (40) RECOMMENDED

SECTION VI – HANDLING OF SPILLS OR LEAKS

PROCEDURES FOR CLEAN-UP

USE ABSORBENT MATERIAL FOR LIQUIDS AND/OR SCOOP SOLIDS TO DISPOSAL FACILITY. MAYBE INCINERATED OR LANDFILLED. ORDINARY HOUSEKEEPING PROCEDURES ARE ADEQUATE. (41)

WASTE DISPOSAL

DISPOSE OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. (42)

SECTION VII – SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

KEEP CONTAINERS DRY AND CLOSED UNTIL READY FOR USE. PROTECT CONTENTS FROM LONG TERM STORAGE TEMPERATURES ABOVE 125°F TO PROLONG SHELF LIFE. (43)

SECTION VIII – TRANSPORTATION DATA

(44) UNREGULATED BY D.O.T. [X]	U.S. D.O.T. PROPER SHIPPING NAME (47)
(45) REGULATED BY D.O.T [ ]	U.S. D.O.T. HAZARD CLASS (48) / I.D. NUMBER (49)
TRANSPORTATION EMERGENCY INFORMATION CHEM TREC 1-(800) 424-9300 (46)	RQ (50) / LABEL(S) REQUIRED (51) FREIGHT CLASSIFICATION (52) FATTY ACIDS OF VEGETABLE OIL SPECIAL TRANSPORTATION NOTES (53)

RECEIVED OCT 19 1984 WITCO

SECTION IX – COMMENTS

(54)

SIGNATURE [signature] TITLE BRUCE MOORMAN REGULATORY COMPLIANCE

REVISION DATE JAN. 1, 1984 SENT TO ATTN: _____ DATE _____

SUPERSEDES ALL PREVIOUS

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

0031-0111

2051 LANE AVENUE, NORTH (P.O. BOX 6170)
JACKSONVILLE, FLORIDA 32205
TELEPHONE (904) 786-1770

EXHIBIT "B"- 3

PRODUCT TRADE NAME UNIPINE 80

CHEMICAL NAME AND SYNONYMS Synthetic Pine Oil

CHEMICAL FAMILY Terpene, Hydrocarbons and Alcohols FORMULA $C_{10}H_{16}$ and $C_{10}H_{16}O$

COMPOSITION/ASSAY, %, (TYPICAL)

Hydrocarbons

(alpha-Pinene, Camphene, beta-Pinene, alpha-Phellandrene, alpha-Terpinene, 1,4-Cineole, Limonene, 1,8-Cineole, g-Terpinene, p-Cymene, Terpinolene)

Alcohols and Other Oxygenated Compounds

(Fenchone, Camphor, Fenchyl Alcohol, g-Terpineol, beta-Terpineol, alpha-Terpineol.)

Higher Boiling Materials (Terpin, trans-Anethole)

HEAVY METALS _____ LEVEL Nil

ADDITIVES / PRESERVATIVES None LEVEL _____

PHYSICAL PROPERTIES (MIN. - MAX.)

COLOR (APHA)	10 - 20	DISTILLATION RANGE, °C:	
SPECIFIC GRAVITY (15.5/15.5°C)	0.926-0.928	INITIAL BOILING RANGE	189
FLASH POINT (TCC), °F	167	5%	200
VAPOR PRESSURE (760 mm)	190	95%	220
SOLUBILITY IN WATER	Nil	DRY POINT	---
		EVAPORATION RATE (n-BUTYL ACETATE =1)	> 1
		VAPOR DENSITY (AIR =1)	> 1

NFPA CLASSIFICATION

HEALTH = 1 FLAMMABILITY = 2 REACTIVITY = 1

PHYSIOLOGICAL PROPERTIES

ACUTE TOXICITY LD_{50} ORAL: N/A

DERMAL: N/A

EFFECTS UPON EYES: Severe irritation of mucous membranes.

EFFECTS UPON SKIN: A weak allergen. Local irritation on prolonged exposure.

ESTIMATE OF ACUTE HAZARD BY INHALATION: Dizziness, palpitation, or bronchitis on prolonged exposure to high concentration of vapor.

THRESHOLD LIMIT VALUE (TLV): Unknown

INGESTION:

Give one or two glasses of water or milk and call physician. Do not induce vomiting except on advice of physician.

EYE CONTACT:

Flush eye with water for at least fifteen (15) minutes or until all traces of the material have been flushed out. Apply an eye ointment, if available, and have physician examine eye to determine if further treatment is needed or eye damage has occurred.

SKIN CONTACT:

Wash affected parts thoroughly with soap and water to remove the material from the skin. Remove any clothing which has become saturated with the material. Apply an antiseptic first-aid cream to the affected parts. If irritation persists, contact a physician for examination.

INHALATION:

Remove the victim to fresh air. If victim is unconscious or dizziness occurs, treat for shock. Contact physician.

PRECAUTIONS FOR NORMAL USE:

Do not mix with non-terpenic materials unless known to be safe or controllable. Avoid elevated temperatures and open flames when storing or transferring. Do not allow to come in contact with Oxygen.

PROTECTIVE EQUIPMENT:

Use goggles, gloves, and respirator masks (Organic Vapor Removal) where applicable or advisable.

STORAGE REQUIREMENTS:

Store in metal tanks equipped with Flame Arresting devices.

PROCEDURE IN CASE OF SPILL OR LEAKAGE:

Confine spill to prevent spreading. Material floats on water and may be pumped or skimmed off surface when confined. If not ignited, material spilled on hard surfaces may be sprayed with water to disperse vapors and flush away from exposures to fire.

FIRE FIGHTING PROCEDURES:

Water may spread fire. Use Carbon Dioxide, Foam, or Dry Chemical extinguishing mediums. Water may be used to reduce the temperature of adjacent tanks, etc., in preventing their catching fire. Live steam effective in many cases when directed at flames.

WASTE AND CONTAINER DISPOSAL:

Material may be burned in controlled combustion devices or absorbed in suitable disposal beds. Do not allow material to flow into natural waters (ecological reasons) or drainage ditches which may flow by open flames.

EXHIBIT "B"- 4

MATERIAL SAFETY DATA SHEET

U.S. DEPARTMENT OF LABOR
WAGE AND LABOR STANDARDS ADMINISTRATION
BUREAU OF LABOR STANDARDS

NO CAS not on list

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
ONYX CHEMICAL COMPANY	201 434-1700

ADDRESS (Number, Street, City, State, and ZIP Code)
190 Warren Street, Jersey City, NJ 07302

CHEMICAL NAME AND SYNONYMS
Coconut Fatty Acid Diethanolamide

TRADE NAME & SYNONYMS
Super Amide GR

CHEMICAL FAMILY
Nonionic

FORMULA $R-\overset{O}{\overset{\|}{C}}-N(CH_2CH_2OH)_2$

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
SECTION II NOT APPLICABLE		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	>212	SPECIFIC GRAVITY (H_2O=1)	.99
VAPOR PRESSURE (mm Hg.)		PERCENT, VOLATILE BY VOLUME (%)	-
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1)	
SOLUBILITY IN WATER	20%		
APPEARANCE AND ODOR	Straw liquid		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
146°F. Pensky-Martens Closed Cup			

EXTINGUISHING MEDIA: Water

SPECIAL FIRE FIGHTING PROCEDURES: None

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

0031-0114

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

EFFECTS OF OVEREXPOSURE

Inhalation - None

Skin and Eye - Irritation

EMERGENCY AND FIRST AID PROCEDURES

Skin and Eye - In case of contact, flush with plenty of water. If irritation persists, call a physician.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	x	

INCOMPATABILITY *(Materials to avoid)*

Strong Oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	x	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Pick up excess with shovel or absorbent material and place in separate container. Flush remaining with water or if foaming occurs isopropanol.

WASTE DISPOSAL METHOD

Material should be placed in a container and disposed of according to local provisions.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*

VENTILATION Normal	LOCAL EXHAUST	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES Non-absorbent	EYE PROTECTION Goggles or faceshield

OTHER PROTECTIVE EQUIPMENT

Protective apron

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Store in a dry place no lower than 50°F. or higher than 120°F.

OTHER PRECAUTIONS

Olin

EXHIBIT "B"- 5

SAFETY DATA

SECTION I

CHEMICAL NAME & SYNONYMS: Ethylene glycol monoethyl ether

CHEMICAL FAMILY	FORMULA	TRADE NAME
Polyalcohol	$C_2H_5OCH_2CH_2OH$	Poly-Solv® EE

MANUFACTURER'S NAME	ADDRESS	EMERGENCY TELEPHONE NO.
OLIN CORPORATION	120 LONG RIDGE ROAD, STAMFORD, CONN. 06904	(203) 356-2345

SECTION II HAZARDOUS INGREDIENTS

COMPONENT	%	TLV	COMPONENT	%	TLV	COMPONENT	%	TLV

Workers list

HAZARDOUS MIXTURE OF OTHER LIQUIDS, SOLIDS, OR GASES

CORROSIVE ACTION ON MATERIALS (metals,rubber,plastics,etc.)

SECTION III PHYSICAL DATA

MELTING POINT (°F)	VAPOR PRESSURE (mm Hg.) 20°C 3.8	PERCENT VOLATILE BY VOLUME (%) 100
BOILING POINT (°F) 275	VAPOR DENSITY (AIR=1) 3.0	EVAPORATION RATE (_____=1) 0.32
SPECIFIC GRAVITY (H_2O=1) 0.931	SOLUBILITY IN WATER complete	OTHER

APPEARANCE AND ODOR: Clear Liquid, Ethereal

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (method used)	FLAMMABLE LIMITS Vol. %	Lel	Uel
130°F COC		1.8	14.0

EXTINGUISHING MEDIA: Water, Foam, CO_2, Dry Chemical

SPECIAL FIRE FIGHTING PROCEDURES

UNUSUAL FIRE AND EXPLOSION HAZARDS

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	EFFECTS OF OVEREXPOSURE
200 ppm	Lethargy, injury to the kidneys and liver

EMERGENCY AND FIRST AID PROCEDURES

SKIN: Flush thoroughly with water, can be absorbed through the skin

EYES: Flush thoroughly with water

INGESTION: Wash out mouth thoroughly with water, induce vomiting, call a physician.

INHALATION: Remove victim to fresh air.

TOXICOLOGY	
ACUTE ORAL LD_{50} 6.1 g/kg (rats)	EYE IRRITATION Irritant
ACUTE DERMAL TOXICITY LD_{50} = 3.6 ml/kg (rabbits)	PRIMARY SKIN IRRITATION Not an irritant
ACUTE INHALATION TOXICITY LC_{50} = 1820 ppm for 7 hours (mice)	OTHER

SECTION VI REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY (Materials to avoid)

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Wear protective clothing, add dry absorbent and shovel or sweep up.

WASTE DISPOSAL METHOD

Bury in landfill according to local, state, and federal regulations.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATOR PROTECTION (Specify type)

NIOSH - approved respirator

VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL (General)	OTHER

PROTECTIVE GLOVES: Rubber	EYE PROTECTION: Safety glasses

OTHER PROTECTIVE EQUIPMENT

Coveralls, safety shoes

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

OTHER PRECAUTIONS

SECTION X REMARKS

CAS Name ETHANOL, 2-ETHOXY

CAS Number [110-80-5]

DATE: 5/25/78

TOXICOLOGY INFORMATION FURNISHED BY: Steven J. Barbee, Ph.D. (Toxicologist)

Department of Environmental Hygiene and Toxicology

Olin CHEMICALS
120 Long Ridge Road, Stamford, Connecticut 06904

Printed in U.S.A.

EXHIBIT "B"- 6

Dow U.S.A.

Material Safety Data Sheet

The Dow Chemical Company
Midland, Michigan 48674

Dow Chemical U.S.A.* Midland, MI 48674 Emergency Phone: 517-636-4400

Product Code: 22366 Page: 1

Product Name: DOWANOL (R) EB ETHYLENE GLYCOL BUTYL ETHER

Effective Date: 12/02/91 Date Printed: 01/16/93 MSDS:000046

1. INGREDIENTS: (% w/w, unless otherwise noted)

Ethylene glycol n-butyl ether CAS# 000111-76-2 99%

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

2. PHYSICAL DATA:

BOILING POINT: 340F
VAP PRESS: 0.88 mmHg @ 25C
VAP DENSITY: (Air = 1) 4.10
SOL. IN WATER: Infinitely.
SP. GRAVITY: .897 @ 25/25C
APPEARANCE: Water white liquid.
ODOR: Ether-like odor.

Water Flash

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: 150F
METHOD USED: TCC

FLAMMABLE LIMITS
LFL: 1.1% Vol.
UFL: 10.6% Vol.

EXTINGUISHING MEDIA: Water fog, CO2, dry chemical, foam. For large scale fires, alcohol resistant foams are preferred if available. General purpose synthetic foams or protein foams may function, but much less effectively. Water may be used to flush spills away from fire exposures and to dilute spills to non-flammable mixtures. If possible, contain fire run off water.

FIRE & EXPLOSION HAZARDS: Auto ignition temperature is 471F (244C).

Keep unnecessary people away; isolate hazard area and deny unnecessary entry. When using water spray, boil over may

(Continued on page 2 , over)

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3. FIRE AND EXPLOSION HAZARD DATA: (CONTINUED)

occur when the product temperature reaches the boiling point of water (tank type scenarios, not spills). See also 'STORAGE AND HANDLING' section of this msds.

FIRE-FIGHTING EQUIPMENT: Wear positive-pressure, self-contained breathing apparatus and full protective equipment.

4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) Prevent contact with zinc, magnesium, and galvanized metals.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Oxidizing material.

HAZARDOUS DECOMPOSITION PRODUCTS: Combustion may produce carbon dioxide and toxic carbon monoxide. Unidentified organic compounds may be formed during combustion.

HAZARDOUS POLYMERIZATION: Will not occur.

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ACTION TO TAKE FOR SPILLS/LEAKS: Keep out of sewers, storm drains, surface waters and soil. Add absorbent; remove with rubber shovel.

DISPOSAL METHOD: ++DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER++. For unused or uncontaminated material, the preferred management options are to send to a licensed recycler, reclaimer, or incinerator. The same management options are recommended for used or contaminated material, although additional evaluation is required. (see, for example, 40CFR Part 261, "Identification and Listing of Hazardous Waste.") Any disposal practice must be in compliance with federal, state, provincial, and local laws and regulations. Check with appropriate agencies for your location. For additonal information, see Section 4 (REACTIVITY DATA) and "REGULATORY INFORMATION".

As a service to its customers, Dow can provide lists of companies which recycle, reprocess or manage chemicals and companies that recondition used drums. Telephone Dow's Customer Information Center at 800/447-4369 or 517/832-1556 for further details.

(Continued on page 3)

6. HEALTH HAZARD DATA:

EYE: May cause moderate eye irritation. May cause moderate corneal injury. Effects may be slow to heal. Vapors may irritate eyes.

SKIN CONTACT: Prolonged or repeated exposure may cause skin irritation.

SKIN ABSORPTION: A single prolonged exposure may result in the material being absorbed in harmful amounts. Excessive exposure may cause hemolysis, thereby impairing the blood's ability to transport oxygen. The LD50 for skin absorption in rabbits is 220 mg/kg. Repeated minor exposure may result in absorption of harmful amounts.

INGESTION: Single dose oral toxicity is moderate. The oral LD50 for rats is 470 mg/kg. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury. One case of massive ingestion (i.e., attempted suicide) reported blood (hemolysis) and kidney effects.

INHALATION: A single prolonged (hours) excessive inhalation exposure may cause adverse effects. Excessive exposure may cause irritation to upper respiratory tract. Observations in animals include blood and kidney effects. The LC50 for rats is 700 ppm in 7 hours.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: Observations in animals include blood and kidney effects.

TERATOLOGY (BIRTH DEFECTS): Birth defects are unlikely. Exposures having no effect on the mother should have no effect on the fetus. Did not cause birth defects in animals; other effects were seen in the fetus only at doses which caused toxic effects to the mother.

REPRODUCTIVE EFFECTS: In animal studies, fertility or reproduction were affected only following potentially lethal oral doses.

MUTAGENICITY (EFFECTS ON GENETIC MATERIAL): Results of mutagenicity tests in animals have been negative. Results of in vitro (test tube) mutagenicity tests have been inconclusive.

7. FIRST AID:

(Continued on page 4 , over)

7. FIRST AID: (CONTINUED)

EYES: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

SKIN: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician if irritation persists. Wash clothing before reuse. Destroy contaminated shoes.

INGESTION: Induce vomiting if large amounts are ingested. Consult medical personnel.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

NOTE TO PHYSICIAN: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

8. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE(S): OSHA PEL and ACGIH TLV are 25 ppm, skin.

VENTILATION: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. For emergency and other conditions where the exposure guidelines may be greatly exceeded, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply.

SKIN PROTECTION: Use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse. Contaminated leather items, such as shoes, belts and watchbands, should be removed and destroyed.

EYE PROTECTION: Use chemical goggles. If vapor exposure causes

(Continued on page 5)

8. HANDLING PRECAUTIONS: (CONTINUED)

eye discomfort, use a full-face respirator.

9. ADDITIONAL INFORMATION:

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Handle with care. Avoid all skin and eye contact. Avoid breathing vapor.

Trace quantities of ethylene oxide (EO) may be present in this product. While these trace quantities could accumulate in headspace areas of storage and transport vessels, they are not expected to create a condition which will result in EO concentrations greater than 0.5 ppm (eight-hour TWA) in the breathing zones of the workplace for appropriate applications. OSHA has established a permissible exposure limit of 1.0 ppm eight-hour TWA for EO. (Code of Federal Regulations, Part 1910.1047 of Title 29).

Spills of these organic liquids on hot fibrous insulations may lead to lowering of the autoignition temperature possibly resulting in spontaneous combustion.

Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld or perform similar operations on or near empty containers.

Will produce flammable vapors above the flash point.

MSDS STATUS: Revised Regulatory Information.

For information regarding state/provincial and federal regulations see The Regulatory Information Section.
(R) Indicates a trademark of The Dow Chemical Company

* An Operating Unit of The Dow Chemical Company

REGULATORY INFORMATION: (Not meant to be all-inclusive--selected regulations represented.)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See MSD Sheet for health and safety information.

U.S. REGULATIONS

SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
GLYCOL ETHERS		99 %

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

An immediate health hazard
A delayed health hazard
A fire hazard

TOXIC SUBSTANCES CONTROL ACT (TSCA):

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

The CAS number for TSCA is 000111-76-2.

CANADIAN REGULATIONS

(Continued on page R-2 , over)

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REGULATORY INFORMATION (CONTINUED)

The Workplace Hazardous Materials Information System (W.H.M.I.S.) Classification for this product is:

B3
D1B
D2B

The Transportation of Dangerous Goods Act (T.D.G.A.) classification for this product is:

ETHYLENE GLYCOL MONOBUTYL ETHER
Class 6.1/UN 2369/III

EXHIBIT "B"- 2

Material Safety Data Sheet

The Dow Chemical Company
Midland, Michigan 48674

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

24-Hour Emergency Phone Number: 517-636-4400

Product: DOWANOL* DM GLYCOL ETHER

Product Code: 22332

Effective Date: 08/23/96 Date Printed: 01/03/97 MSD: 000044

The Dow Chemical Company, Midland, MI 48674

Customer Information Center: 800-258-2436

2. COMPOSITION/INFORMATION ON INGREDIENTS

Diethylene glycol methyl ether	CAS# 000111-77-3	99%

3. HAZARDS IDENTIFICATION

not on list

EMERGENCY OVERVIEW

****
* Colorless liquid. Mild odor. Combustible. *
* *
****

POTENTIAL HEALTH EFFECTS (See Section 11 for toxicological data.)

EYE: May cause pain. May cause slight transient (temporary) eye irritation.

SKIN: Prolonged or repeated exposure not likely to cause significant skin irritation. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

INGESTION: Single dose oral toxicity is considered to be low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury.

INHALATION: Single exposure to vapors is not likely to be hazardous.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: Observations in animals

(Continued on page 2 , over)

include kidney, liver and, at very high doses, testicular effects.

TERATOLOGY (BIRTH DEFECTS): In laboratory animals, has been reported to cause slight toxic effects to the fetus at doses nontoxic to the mother following skin contact. Birth defects have been reported in lab animals only following high oral doses, exposures which have little relevence to potential human exposure.

4. FIRST AID

EYE: Flush eyes with plenty of water.

SKIN: Wash off in flowing water or shower.

INGESTION: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

INHALATION: Remove to fresh air if effects occur. Consult a physician.

NOTE TO PHYSICIAN: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES
FLASH POINT: 197F,92C
METHOD USED: Setaflash
AUTOIGNITION TEMPERATURE: Not determined.

FLAMMABILITY LIMITS
LFL: 1.38%
UFL: 22.7%

HAZARDOUS COMBUSTION PRODUCTS: During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include and are not limited to: carbon monoxide, carbon dioxide.

OTHER FLAMMABILITY INFORMATION: Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Spills of these organic liquids on hot fibrous insulations may lead to lowering of the autoignition temperatures

(Continued on page 3)

possibly resulting in spontaneous combustion.

EXTINGUISHING MEDIA: Water fog or fine spray, carbon dioxide, dry chemical, foam. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively.

MEDIA TO BE AVOIDED: Do not use direct water stream.

FIRE FIGHTING INSTRUCTIONS: Keep people away. Isolate fire area and deny unnecessary entry. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES (See Section 15 for Regulatory Information)

PROTECT PEOPLE: Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. For large spills, warn public of downwind explosion hazard. Check area with explosion meter before reentering area. Ground and bond all containers and handling equipment.

PROTECT THE ENVIRONMENT: Vapor explosion hazard, keep out of sewers.

CLEANUP: Pump with explosion-proof equipment. Absorb with material such as dirt or sand. If available, use foam to smother or suppress.

7. HANDLING AND STORAGE

HANDLING: Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. No smoking, open flames or sources of ignition in handling and storage area. Never use air pressure for transferring product. Electric-

(Continued on page 4 , over)

ally ground all equipment.

STORAGE: Use of non-sparking or explosion proof equipment may be necessary, depending upon the type of operation. Minimize sources of ignition, such as static buildup, heat, spark or flame. Keep containers tightly closed when not in use. Store in carbon steel, stainless steel, Teflon.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERINC CONTROLS: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: Use safety glasses.

SKIN PROTECTION: No precautions other than clean body-covering clothing should be needed.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator.

EXPOSURE GUIDELINE: Diethylene glycol methyl ether: Dow IHG is 30 ppm.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: Colorless liquid.
ODOR: Mild odor.
VAPOR PRESSURE: .25 mmHg @ 25C
VAPOR DENSITY: 4.16
BOILING POINT: 381F, 194C
SOLUBILITY IN WATER/MISCIBILITY: Completely miscible.
SPECIFIC GRAVITY OR DENSITY: 1.021 @ 25/25C
VOLATILE ORGANIC COMPOUNDS (VOC) CONTENT: 1021 g/L or 8.47 lb/gal as per Rule 443.1 of California SCAQMD

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under recommended storage conditions. See Storage Section.

(Continued on page 5)

CONDITIONS TO AVOID: Avoid static discharge. Flammable vapors can be released at elevated temperatures.

INCOMPATIBILITY WITH OTHER MATERIALS: Avoid contact with oxidizing materials.

HAZARDOUS DECOMPOSITION PRODUCTS: Does not normally decompose. Hazardous decomposition products depend upon temperature, air supply and the presence of other materials.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION (See Section 3 for Potential Health Effects. For detailed toxicological data, write or call the address or non-emergency number shown in Section 1)

SKIN: The LD50 for skin aborption in rabbits is 20 ml/kg.

INGESTION: The oral LD50 for rats is > 7000 mg/kg.

12. ECOLOGICAL INFORMATION (For detailed Ecological data, write or call the address or non-emergency number shown in Section 1)

ENVIRONMENTAL FATE

MOVEMENT & PARTITIONING: Bioconcentration potential is low (BCF less than 100 or Log Pow less than 3). Log octanol/water partition coefficient (log Pow) is estimated using the Pomona-MedChem structural fragment method to be -0.682.

DEGRADATION & PERSISTENCE: Biodegradation under aerobic static laboratory conditions is high (BOD or BOD/ThOD greater than 40%). 20-Day biochemical oxygen demand (BOD20) is 1.14 p/p. 10-Day biochemical oxygen demand (BOD) is 0.36 p/p. 5-Day biochemical oxygen demand (BOD5) is 0.00 p/p. Theoretical oxygen demand (ThOD) is calculated to be 1.73 p/p. Biodegradation rate may increase in soil and/or water with acclimation.

ECOTOXICITY: Material is practically non-toxic to aquatic organisms on an acute basis (LC50 greater than 100 mg/L in most sensitive species). Acute LC50 for fathead minnow (Pimephales promelas) is 5741 mg/L. Acute LC50 for water flea (Daphnia magna) is 1192 mg/L. Acute LC50 for emerald shiner (Notropis atherinoides) is greater than 500 mg/L.

13. DISPOSAL CONSIDERATIONS (See Section 15 for Regulatory Information)

(Continued on page 6 , over)

DISPOSAL: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. THE DOW CHEMICAL COMPANY HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (Composition/Information On Ingredients).

FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: recycler, reclaimer, incinerator or other thermal destruction device.

As a service to its customers, Dow can provide lists of companies which recycle, reprocess or manage chemicals or plastics, and companies that manage used drums. Telephone Dow's Customer Information Center at 800-258-2436 or 517-832-1556 for further details.

14. TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORTATION (D.O.T.): For DOT regulatory information, if required, consult transportation regulations, product shipping papers or contact your Dow representative.

CANADIAN TDG INFORMATION: This product is not regulated by TDG when shipped domestically by land.

15. REGULATORY INFORMATION (Not meant to be all-inclusive--selected regulations represented)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See other sections for health and safety information.

U.S. REGULATIONS

(Continued on page 7)

REGULATORY INFORMATION (CONTINUED)

SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
GLYCOL ETHERS		99 %

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

A delayed health hazard
A fire hazard

TOXIC SUBSTANCES CONTROL ACT (TSCA):

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

The CAS Number for TSCA is 111-77-3.

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

CHEMICAL NAME	CAS NUMBER	LIST
DIETHYLENE GLYCOL MONOMETHYL ETHER	000111-77-3	PA1

PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%).

OSHA HAZARD COMMUNICATION STANDARD:

(Continued on page 8 , over)

REGULATORY INFORMATION (CONTINUED)

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

Health	2
Flammability	2
Reactivity	0

CANADIAN REGULATIONS

WHMIS INFORMATION: The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is:

B3 - combustible liquid with a flash point between 37.8C and 93.3C
D2A - material is teratogenic, embryotoxic, or fetotoxic
Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace education program.

- - - - -

CPR STATEMENT: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

- - - - -

HAZARDOUS PRODUCTS ACT INFORMATION: This product contains the following ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA section 13 and 14):

COMPONENTS:	CAS #	AMOUNT (%w/w)
DIETHYLENE GLYCOL METHYL ETHER	000111-77-3	99%

16. OTHER INFORMATION

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

Health	2
Flammability	2
Reactivity	0

MSDS STATUS: Revised Sections 3-16.

THE DOW CHEMICAL COMPANY QUALITY ASSURANCE OFFICE
SALES SPECIFICATION

DATE PRINTED: 23 SEP 93 PAGE: 01
PRODUCT: 22332 EFFECTIVE: 07 AUG 90 SUPERSEDES: 11 MAY 88

NAME: DOWANOL (R) DM GLYCOL ETHER

DESC: SLIGHTLY COLORED LIQUID

REQUIREMENTS

ITEM	LIMIT	UNIT	METHOD
DISTILLATION RANGE @ 760 MM HG, IBP-DP	192-196	C	22332;
SPECIFIC GRAVITY @ 25/25 C	1.017-1.021		22332;
ACIDITY (AS ACETIC ACID), MAX	0.01	%	22332;
APHA COLOR, MAX	10		22332;
WATER, MAX	0.10	%	22332;

READ PRECAUTIONARY INFORMATION AND MATERIAL SAFETY SHEETS.
THIS PRODUCT IS SHIPPED IN COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS REGARDING CLASSIFICATION, PACKAGING, SHIPPING AND LABELING.

(R) INDICATES A TRADEMARK OF THE DOW CHEMICAL COMPANY LAST PAGE

DOW CHEMICAL U S A

BAYONNE TERMINAL

CERTIFICATE OF ANALYSIS

****

DATE: 010297

SHIP TO:
FISH-CALLAHAN CHEMICAL COMPANY
INC

WALPOLE , MA 020810000
CUSTOMER ORDER NUMBER: 1230611-B
LOT NUMBER : KL26019752
MATERIAL : DOWANOL* DM GLYCOL ETHER BULK
DOW INVOICE NUMBER : 025165600001
SHIPPED FROM: BAYONNE, NJ

I CERTIFY :

TEST	LIMITS	RESULT
COLOR,APHA,MAX.	10	3
DISTILLATION RANGE @ 760 MM HG, IBP - DP	191.0 - 198.0	193.0 - 195.0
SPECIFIC GRAV. @ 25/25 C	1.017 - 1.021	1.018
ACIDITY,AS ACETIC,% MAX.	0.01	0.002
WATER,%,MAX.	0.10	0.015
APPEARANCE	CLEAR & FREE FROM FOREIGN MATTER	CONFORMS
DIST.RANGE FOR MIL-I-8547	192-196	193.0-195.0
IDENTIFICATION (G.C.)	MATCHES STANDARD	MATCHES
ACID NUMBER,MAX	0.09	LESS THAN 0.09
ETHYLENE GLYCOL,% MAX.	0.5	0.09
SPECIFIC GRAVITY@ 20C	1.021 - 1.025	1.022
PH(25% IN WATER)	5.0 - 8.5	7.6
FLASH PT,MIN.	85 C	GREATER THAN 85C
ANTIOXIDENT PPM	50 - 150	CONFORMS
MEETS MILITARY SPECS. MIL-I-85470		
DIETHYLENE GLYCOL METHYL ETHER,MIN.	99.0 %	99.9

This certificate of analysis applies to the bulk product
as loaded into ARCT vehicle 94 /550 on 02-Jan-97

These tests are certified by lot analysis and
are not normally made on individual shipments.

Powell Duffryn Laboratory
For : DOW NORTH AMERICA
2 COMMERCE STREET
BAYONNE, NEW JERSEY 07002

WFAX0016 VMA0004 9088 18SEP98 1020/1021
TO: LEONA WATKINS
INTER POLYMER CORPORATION
200 DAN ROAD
CANTON MA 02021

EXHIBIT "B"- 8

UNION CARBIDE CORPORATION

MATERIAL SAFETY DATA SHEET

EFFECTIVE DATE 06/30/97

Union Carbide urges each customer or recipient of this MSDS to study it carefully to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology, and fire prevention, as necessary or appropriate to use and understand the data contained in this MSDS.

To promote safe handling, each customer or recipient should: (1) notify its employees, agents, contractors and others whom it knows or believes will use this material or the information in this MSDS and any other information regarding hazards or safety; (2) furnish this same information to each of its customers for the product; and (3) request its customers to notify their employees, customers, and other users of the product of this information.

I. IDENTIFICATION

PRODUCT NAME: ETHYLENE GLYCOL, INDUSTRIAL GRADE

CHEMICAL NAME: Ethylene Glycol

CHEMICAL FAMILY: Glycols

FORMULA: HOC2H4OH

MOLECULAR WEIGHT: 62.07

SYNONYMS: EG; Glycol; 1,2-Ethanediol

CAS # AND NAME:
107-21-1
1,2-Ethanediol

II. PHYSICAL DATA (Determined on typical material)

BOILING POINT, 760 mm Hg: >197 C (>387 F)

SPECIFIC GRAVITY(H2O = 1): 1.115 at 20/20'C

EMERGENCY PHONE NUMBERS: 1-800-UCC-HELP (Number available at all times) OR (304) 744-3487

FREEZING POINT: -13 C (9 F)

VAPOR PRESSURE AT 20'C: 0.06 mmHg

VAPOR DENSITY (air = 1): 2.1

EVAPORATION RATE:
(Butyl Acetate = 1): 0.01

SOLUBILITY IN WATER by wt: 100%

APPEARANCE: Transparent colorless

ODOR: Mild sweet

PHYSICAL STATE: Liquid

III. INGREDIENTS

%	MATERIAL	CAS#	EXPOSURE LIMIT
100	Ethylene Glycol	107-21-1	See Section V

IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (test method(s)):
241 F (116 C)
Tag Closed Cup ASTM D 56

240 F (115.6 C)
Cleveland Open Cup ASTM D 92

FLAMMABLE LIMITS IN AIR, by volume:

LOWER: Approx. 3.2 (Ethylene Glycol)
UPPER: 15.3 (Estimated)

EXTINGUISHING MEDIA:
Apply alcohol-type or all-purpose-type foam by manufacturer's recommended techniques for large fires. Use carbon dioxide or dry chemical media for small fires.

SPECIAL FIRE FIGHTING PROCEDURES:
Do not direct a solid stream of water or foam into hot, burning pools; this may cause frothing and increase fire intensity.
Use self-contained breathing apparatus and protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
See "Other Precautions" in Section IX.

V. HEALTH HAZARD DATA

TLV AND SOURCE:
Ethylene glycol: 100 mg/m3 (39.4 ppm) Ceiling, Aerosol, ACGIH
125 mg/m3 (50 ppm) Ceiling, Vapor and Mist, OSHA
Internal Exposure Limit:
100 mg/m3 (39.4 ppm) Ceiling, Aerosol and Vapor

EFFECTS OF SINGLE OVEREXPOSURE:

SWALLOWING:
May cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, malaise, blurring of vision, irritability, lumbar pain, oliguria, uremia, and central nervous system effects, including irregular eye movements, convulsions and coma. Cardiac failure and pulmonary edema may develop. Severe kidney damage follows the swallowing of large volumes of ethylene glycol. May be fatal. A few reports have been published describing the development of weakness of the facial muscles, diminished hearing, and difficulty with swallowing, during the late stages of severe poisoning.

SKIN ABSORPTION:
No evidence of harmful effects from available information.

INHALATION:
May cause irritation of the nose and throat with headache, particularly from mist. High vapor concentrations caused, for example, by heating the material in an enclosed and poorly ventilated workplace, may produce nausea, vomiting, headache, dizziness, and irregular eye movements.

SKIN CONTACT:
No evidence of harmful effects from available information.

EYE CONTACT:
Liquid, vapor, or mist causes irritation, experienced as stinging, excess blinking and tear production, with excess redness of the conjunctiva. Injury to the cornea is not expected.

EFFECTS OF REPEATED OVEREXPOSURE:
Repeated inhalation of ethylene glycol mist may produce signs of central nervous system involvement, particularly dizziness and nystagmus.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:
May aggravate an existing kidney disease.

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH HAZARD EVALUATION:
Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations or doses. The no-effect doses for developmental toxicity for ethylene glycol given by gavage over the period of organogenesis has been shown to be 150 mg/kg/day for the mouse and 500 mg/kg/day for the rat. Also, in a preliminary study to assess the effects of exposure of pregnant rats and mice to aerosols at concentrations of 150, 1000 and 2500 mg/m3 for 6 hours a day throughout the

period of organogenesis, teratogenic effects were produced at the highest concentration, but only in mice. The conditions of these latter experiments

did not allow a conclusion as to whether the developmental toxicity was mediated by inhalation of aerosol, percutaneous absorption of ethylene glycol from contaminated skin, or swallowing of ethylene glycol as a result of grooming the wetted coat. In a further study, comparing effects from high aerosol concentration by whole-body or nose-only exposure, it was shown that nose-only exposure resulted in maternal toxicity (1000 and 2500 mg/m3) and developmental toxicity with minimal evidence of teratogenicity (2500 mg/m3). The no-effects concentration (based on maternal toxicity) was 500 mg/m3. In a further study in mice, no teratogenic effects could be produced when ethylene glycol was applied to skin of pregnant mice over the period of organogenesis. The above observations suggest that ethylene glycol is to be regarded as an animal teratogen. There is currently no available information to suggest that ethylene glycol has caused birth defects in humans. Cutaneous application of ethylene glycol is ineffective in producing developmental toxicity. Exposure to high aerosol concentrations is only minimally effective in producing developmental toxicity. The major route for producing developmental toxicity is perorally.

Two chronic feeding studies, using rats and mice, have not produced any evidence that ethylene glycol causes dose-related increases in tumor incidence, or a different pattern of tumors compared with untreated controls. The absence of a carcinogenic potential for ethylene glycol has been supported by numerous in vitro genotoxicity studies showing that it does not produce mutagenic or clastogenic effects.

OTHER EFFECTS OF OVEREXPOSURE:
Repeated skin contact with ethylene glycol may, in a very small proportion of cases, cause sensitization with the development of allergic contact dermatitis. The incidence is significantly less than 1% with the undiluted material.

EMERGENCY AND FIRST AID PROCEDURES:

SWALLOWING:
If patient is fully conscious, give two glasses of water. Induce vomiting. This should be done only by medical or experienced first-aid personnel. Obtain medical attention without delay. If medical advice is delayed, and if the person has swallowed a moderate volume of material (a few ounces), then give three to four ounces of hard liquor, such as whiskey. For children, give proportionally less liquor, according to weight.

SKIN:
Remove contaminated clothing. Wash skin with soap and water. Obtain medical attention if irritation persists. Wash clothing before reuse.

INHALATION:
Remove to fresh air. Obtain medical attention if symptoms persist.

EYES:
Immediately flush eyes with water and continue washing for several minutes. Remove contact lenses, if worn. Obtain medical attention.

NOTES TO PHYSICIAN:
It is estimated that the lethal oral dose of ethylene glycol to adults is of the order of 1.0 ml/kg. Ethylene glycol is metabolized by alcohol

dehydrogenase to various metabolites including glycoaldehyde, glycolic acid, and oxalic acid, which cause an elevated anion-gap metabolic acidosis and renal tubular injury. The signs and symptoms in ethylene glycol poisoning are those

of metabolic acidosis, CNS depression, and kidney injury. Urinalysis may show albuminuria, hematuria and oxaluria. Clinical chemistry may reveal anion-gap metabolic acidosis and uremia.

The currently recommended medical management of ethylene glycol poisoning includes elimination of ethylene glycol and metabolites, correction of metabolic acidosis, and prevention of kidney injury. It is essential to have immediate and follow-up urinalysis and clinical chemistry. There should be particular emphasis on acid-base balance and renal function tests. A continuous infusion of 5% sodium bicarbonate with frequent monitoring of electrolytes and fluid balance is used to achieve correction of metabolic acidosis and forced diuresis.

As a competitive substrate for alcohol dehydrogenase, ethanol is antidotal. Given in the early stages of intoxication, it blocks the formation of nephrotoxic metabolites. A therapeutically effective blood concentration of ethanol is in the range 100-150 mg/dl, and should be achieved by a rapid loading dose and maintained by intravenous infusion.

For severe and/or deteriorating cases, hemodialysis may be required. Dialysis should be considered for patients who are symptomatic, have severe metabolic acidosis, a blood ethylene glycol concentrations greater than 25 mg/dl, or compromise of renal functions.

4-Methylpyrazole, a potent inhibitor of alcohol dehydrogenases, has been effectively used to decrease the metabolic consequences of ethylene glycol poisoning before metabolic acidosis, coma, seizures, and renal failure have occurred.

Additional therapeutic measures may include the administration of cofactors involved in the metabolism of ethylene glycol. Thiamine (100 mg) and pyridoxine (50 mg) should be given every six hours.

Pulmonary edema with hypoxemia has been described in a number of patients following poisoning with ethylene glycol. The mechanism of production has not *been elucidated, but it appears to be non-cardiogenic in origin in several* cases. Respiratory support with mechanical ventilation and positive end-expiratory pressure may be required.

There may be cranial nerve involvement in the late stages of toxicity from swallowed ethylene glycol. In particular, effects have been reported involving the seventh, eighth and ninth cranial nerves, presenting with bilateral facial paralysis, diminished hearing, and dysphagia.

VI. REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID:
None known.

INCOMPATIBILITY (materials to avoid):
Explosive decomposition may occur if combined with strong acids or strong bases and subjected to elevated temperatures. Therefore, avoid strong acids and strong bases at elevated temperatures. Avoid contamination with strong oxidizing agents and materials reactive with hydroxyl compounds.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:

Burning can produce the following products:
Carbon monoxide and/or carbon dioxide.
Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant.

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID:
None known.

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Wear suitable protective equipment. Large spills should be contained and collected. Small spills can be collected or may be absorbed with appropriate liquid absorbing materials. All spill response and disposal should be carried out in accordance with Federal, State, and local requirements.

WASTE DISPOSAL METHOD:
Ethylene glycol from many applications is readily reclaimed; reclamation of ethylene glycol from spent fluids is encouraged where possible.
At low concentrations in water this product is biodegradable in a biological wastewater treatment plant.
Where ethylene glycol reclamation or sewering are not viable, this product may be incinerated where permitted under Federal, State and local regulations.

VIII. SPECIAL PROTECTION

RESPIRATORY PROTECTION (specify type):
If personnel exposure exceeds exposure limits 39.4 ppm (100 mg/m3) (aerosol and vapor combined) at any time, select respiratory protection equipment in accordance with 29CFR1910.134. NIOSH-approved atmosphere-supplying respirator or a NIOSH-approved air-purifying respirator with organic vapor cartridge and dust/mist pre-filter is recommended.

VENTILATION:
General (mechanical) room ventilation may be adequate, if handled at ambient temperatures or in covered equipment. If ambient temperatures are exceeded or operations exist which may produce misting, local exhaust ventilation or other engineering controls may be required.

PROTECTIVE GLOVES:
PVC-coated

EYE PROTECTION:
Monogoggles or Faceshield

OTHER PROTECTIVE EQUIPMENT:
Eye Bath, Safety Shower

IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
DANGER!
HARMFUL OR FATAL IF SWALLOWED.
CAUSES EYE IRRITATION.

PROLONGED OR REPEATED BREATHING OF AEROSOL OR VAPOR IS HARMFUL.

MAY CAUSE KIDNEY AND NERVOUS SYSTEM DAMAGE.
CAUSES BIRTH DEFECTS IN LABORATORY ANIMALS.

Do not swallow.
Avoid contact with eyes.
Avoid prolonged or repeated breathing of aerosol and vapor.
Keep container closed.
Use with adequate ventilation.
Wash thoroughly after handling.

FOR INDUSTRY USE ONLY

OTHER PRECAUTIONS:
ADDITIONAL INFORMATION: Additional product safety information on this product may be obtained by calling your Union Carbide Corporation Sales or Customer Service contact.
Ask for the brochure:
Product Information Bulletin on Ethylene Glycol.

PROCESS HAZARD: Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into hot equipment under a vacuum, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions.

Any use of this product in elevated-temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions. Further information is available in a technical bulletin entitled "Ignition Hazards of Organic Chemical Vapors."

X. REGULATORY INFORMATION

STATUS ON SUBSTANCE LISTS:

The concentrations shown are maximum or ceiling levels (weight %) to be used for calculations for regulations. Trade Secrets are indicated by "TS".

FEDERAL EPA

Comprehensive Environmental Response Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQs) in 40 CFR 302.4.

Components present in this product at a level which could require reporting under the statute are:

PRODUCT NAME: ETHYLENE GLYCOL, INDUSTRIAL GRADE

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Ethylene Glycol	107-21-1	100
Acetic Acid	64-19-7	0.005
1,4-Dioxane	123-91-1	0.00005

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 311 and 312).

Components present in this product at a level which could require reporting under the statute are:

*** NONE ***

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are:

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Ethylene Glycol	107-21-1	100

TSCA INVENTORY STATUS:
All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

STATE RIGHT-TO-KNOW

CALIFORNIA Proposition 65
This product contains trace levels of 1,4-DIOXANE known to the State of California to cause cancer.
Upper bound concentration is 0.00005%.

MASSACHUSETTS 105 CMR 670.000 Right-To-Know, Substance List (MSL)
Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

HAZARDOUS SUBSTANCES (=> 1%)

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Ethylene Glycol	107-21-1	100

PENNSYLVANIA Right-To-Know, Hazardous Substance List
Hazardous Substances and Special Hazardous Substances on the List must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

HAZARDOUS SUBSTANCES (=> 1%)

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Ethylene Glycol	107-21-1	100

CALIFORNIA SCAQMD RULE 443.1 VOC'S:
VOC. 1111.00 G/L; Vapor Pressure 0.06 mmHg at 20C.

OTHER REGULATORY INFORMATION:
EPA Hazard Categories: Immediate Health, Delayed Health

NOTE ----
The opinions expressed herein are those of qualified experts within Union Carbide. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of Union Carbide, it is the user's obligation to determine the conditions of safe use of the product.

Date: 10/31/88
REVISION DATE: 06/30/97 Printed in USA
REVISED SECTIONS
Section II - Physical Data
Section VIII- Special Protection
Section IX - Special Precautions
Section X - Regulatory Information
PRODUCT: 35202
F NUMBER: N0178H
FROM SCVM370 AAJCCS1

; MRI-00374

UNION CARBIDE

UNION CARBIDE CHEMICALS AND PLASTICS COMPANY INC.
Industrial Chemicals Division

MATERIAL SAFETY DATA SHEET

EXHIBIT "B"- 9

EFFECTIVE DATE: 09/12/89

Union Carbide urges each customer or recipient of this MSDS to study it carefully to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology, and fire prevention, as necessary or appropriate to use and understand the data contained in this MSDS.

To promote safe handling, each customer or recipient should: (1) notify its employees, agents, contractors and others whom it knows or believes will use this material of the information in this MSDS and any other information regarding hazards or safety; (2) furnish this same information to each of its customers for the product; and (3) request its customers to notify their employees, customers, and other users of the product of this information.

I. IDENTIFICATION

PRODUCT NAME: TERGITOL NONIONIC SURFACTANT NP-9 CO-630 TRITON X-100

CHEMICAL NAME: Nonylphenol Polyethylene Glycol Ether

CHEMICAL FAMILY: Nonionic Surfactant

FORMULA: $C_{33}H_{60}O_{10}$ MOLECULAR WEIGHT: 616 (Average)

SYNONYMS: An alkylphenol-hydroxypolyoxyethylene

CAS # and CAS NAME: 26027-38-3 9016-45-9 9016-45-9
Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenol)-omega-hydroxy-

II. PHYSICAL DATA (Determined on typical material)

BOILING POINT, 760 mm Hg: >250C (>482F) (Decomposes)

FREEZING POINT: 3.8 C (38.8 F)

SPECIFIC GRAVITY (H2O = 1): 1.057 at 20/20 C

VAPOR PRESSURE AT 20C: <0.01 mm Hg

VAPOR DENSITY (air = 1): >1

SOLUBILITY IN WATER by wt: 3.2 Slight haze

EVAPORATION RATE (Butyl Acetate = 1): <0.01

APPEARANCE AND ODOR: Cloudy liquid; mild characteristic odor.

EMERGENCY PHONE NUMBER: 1-800-UCC-HELP (Number available at all times)

UNION CARBIDE CHEMICALS AND PLASTICS COMPANY INC.
Industrial Chemicals Division
39 Old Ridgebury Road, Danbury, CT. 06817-0001

HOUGHTON CHEMICAL CORPORATION
52 CAMBRIDGE ST. (PO BOX 307)
ALLSTON, MA 02134
PH. # (617) 254-1010

PRODUCT NAME: TERGITOL NONIONIC SURFACTANT NP-9

III. INGREDIENTS

MATERIAL	%	TLV (Units)	HAZARD
Nonylphenol Ethoxylate	100	None established	See Section V

IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (test method(s)): 477 F, Pensky-Martens closed cup ASTM D 93
540 F, Cleveland open cup ASTM D 92

FLAMMABLE LIMITS IN AIR, % by volume: LOWER: Not determined
UPPER: Not determined

EXTINGUISHING MEDIA: Water spray (fog), alcohol-type, or all purpose-type foams applied by manufacturers' recommended techniques for large fires. Carbon dioxide or dry chemical for small fires.

SPECIAL FIRE FIGHTING PROCEDURES: Do not direct a solid stream of water or foam into hot, burning pools; this may cause frothing and increase fire intensity. Use self-contained breathing apparatus and protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This material may produce a floating fire hazard.

V. HEALTH HAZARD DATA

TLV AND SOURCE: None established by ACGIH or OSHA.

EFFECTS OF SINGLE OVEREXPOSURE:

SWALLOWING: May cause nausea, abdominal discomfort, vomiting, and diarrhea.

SKIN ABSORPTION: Prolonged or widespread exposure may result in the absorption of potentially harmful amounts of material.

INHALATION: Mists may cause chest discomfort and coughing.

SKIN CONTACT: Brief contact with this material should not produce any harmful effects but prolonged contact, as from clothing wet with the material, may cause irritation.

EYE CONTACT: Causes pain and severe excess reddening and swelling of the conjunctiva, with possible chemical burns.

EFFECTS OF REPEATED OVEREXPOSURE:
Repeated skin contact may result in the development of a cumulative dermatitis.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:
A knowledge of the available toxicology information and of the physical and chemical properties of the material suggests that overexposure is unlikely to aggravate existing medical conditions.

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH HAZARD EVALUATION: Studies involving the sustained occluded contact of undiluted material with rabbit skin indicate that such conditions may result in the development of

inflammatory changes in the lung. We are currently embarked upon a series of studies to further examine these potential effects and their possible relevance, if any, to human health exposure.

OTHER EFFECTS OF OVEREXPOSURE:
Because of its irritant and surfactant properties, breathing vapor or mist of this material, as might be generated in spraying or heating applications, may result in lung injury similar to that observed following exposure by direct deposition of surfactant into the lung.

EMERGENCY AND FIRST AID PROCEDURES:

SWALLOWING:	Give two glasses of water. Do not induce vomiting. Call a physician promptly.
SKIN:	Remove contaminated clothing. Flush skin with plenty of water. If contact has been widespread and/or prolonged, or if irritation persists, call a physician. Wash clothing before reuse.
INHALATION:	Remove to fresh air. Call a physician if discomfort persists.
EYES:	Immediately flush eyes with plenty of water and continue flushing for at least 15 minutes. Get medical care, preferably from an ophthalmologist, urgently.
NOTES TO PHYSICIAN:	There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. Due to the irritant and surfactant action of the material, if it is aspirated during swallowing or vomiting, there may be lung injury. Therefore, emesis should not be induced by mechanical or pharmacological means. If it is considered that evacuation of the stomach contents is necessary, this should be done by means least likely to result in aspiration (e.g., the use of gastric lavage in the presence of endotracheal intubation).

VI. REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: None

INCOMPATIBILITY (materials to avoid):
Normally unreactive; however, avoid strong bases at high temperatures, strong acids, strong oxidizing agents and materials reactive with hydroxyl compounds.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:
Burning can produce carbon monoxide and/or carbon dioxide.

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID: None

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Wear eye protection. Collect for disposal. Highly toxic to fish! Avoid discharge to natural waters.

WASTE DISPOSAL METHOD: Incinerate in a furnace, where permitted under appropriate Federal, State, and local regulations. See Section IX.

VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type):
None expected to be needed.

VENTILATION: General (mechanical) room ventilation is expected to be satisfactory.

PROTECTIVE GLOVES: PVC - coated

EYE PROTECTION: Monogoggles

OTHER PROTECTIVE EQUIPMENT:
Eye bath and safety shower.

IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
DANGER! Causes eye burns.
Causes skin irritation.
Aspiration may cause lung damage.
Do not get in eyes.
Avoid contact with skin and clothing.
Do not swallow.
Use with adequate ventilation.
Keep container closed.
Wash thoroughly after handling.
FOR INDUSTRY USE ONLY

OTHER PRECAUTIONS: This product is not readily biodegradable in a wastewater treatment system and is highly toxic to aquatic life. The preferred method of disposal is incineration.

This product may contain trace amounts of ethylene oxide (CAS No. 75-21-8), a condition which creates the potential for accumulation of ethylene oxide in the head space of shipping and storage containers and in enclosed areas where the product is being handled or used. Ethylene oxide is considered by OSHA, IARC, and NTP as a potential carcinogen for humans. OSHA considers that, at excess levels, ethylene oxide may present reproductive, mutagenic, genotoxic, neurologic and sensitization hazards in humans. If this product is handled with adequate ventilation, the presence of these trace amounts is not expected to result in any short or long term hazard.

This product may not be exempt for OSHA's ethylene oxide standard, 29CFR1910.1047. Users should comply with all applicable provisions. Personnel should be monitored to determine levels of exposure to ethylene oxide. If necessary, protective measures should be taken. The OSHA permissible exposure limit for ethylene oxide is 1 ppm TWA8, the action level is 0.5 ppm TWA8, the ACGIH TLV is 1 ppm TWA8 and OSHA has established an excursion limit of 5 ppm (15 minute average).

WARNING: Hot organic chemical vapors or mists are susceptible to sudden spontaneous combustion when mixed with air. Ignition may occur at temperatures below those published in the literature as "autoignition" or "ignition" temperatures. Ignition temperatures decrease with increasing vapor volume and vapor/air contact time, and are influenced by pressure changes.

Ignition may occur at typical elevated-temperature process conditions, especially in processes operating under vacuum if subjected to sudden ingress of air, or outside process equipment operating under elevated pressure if sudden escape of vapors or mists to the atmosphere occurs.

Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained.

X. REGULATORY INFORMATION

STATUS ON SUBSTANCE LISTS:

The concentrations shown are maximum or ceiling levels (weight %) to be used for calculations for regulations. Trade Secrets are indicated by "TS".

FEDERAL EPA

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQs) in 40 CFR 302.4.

Components present in this product at a level which could require reporting under the statute are:

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Ethylene Oxide	75-21-8	.0020
Dioxane	123-91-1	.0015

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III

requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312).

Components present in this product at a level which could require reporting under the statute are:

*** NONE ***

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III

requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are:

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Glycol Ether	Not Applic.	1.9

STATE RIGHT-TO-KNOW

CALIFORNIA Proposition 65

This product contains trace levels of ACETALDEHYDE, DIOXANE, ETHYLENE OXIDE AND FORMALDEHYDE which the state of California has found to cause cancer, birth defects or other reproductive harm.

MASSACHUSETTS Right-To-Know, Substance List (MSL) Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

EXTRAORDINARILY HAZARDOUS SUBSTANCES (=> 0.0001%)

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Ethylene Oxide	75-21-8	.0020
Dioxane	123-91-1	.0015
Acetaldehyde	75-07-0	.0006

Formaldehyde	50-00-0	.0004

PENNSYLVANIA Right-To-Know, Hazardous Substance List Hazardous Substances and Special Hazardous Substances on the List must be identified when present in products.
Components present in this product at a level which could require reporting under the statute are:
*** NONE ***

Toxic Substances Control Act(TSCA) STATUS:

The ingredients of this product are on the TSCA inventory.

CALIFORNIA SCAQMD RULE 443.1 VOC'S:

Not presently available

OTHER REGULATORY INFORMATION:

*** NONE ***

NOTE ----

The opinions expressed herein are those of qualified experts within Union Carbide Chemicals and Plastics Company. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of Union Carbide Chemicals and Plastics Company, it is the user's obligation to determine the conditions of safe use of the product.

REVISED SECTIONS: This MSDS was revised to include:

- New Health Hazard Data (Refer to Section V).
- A warning statement on the potential for vapors and mists to spontaneously ignite under certain conditions (Refer to Section IX - Other Precautions).
- Information needed for SARA, Title III reporting (Refer to Section X - Superfund Amendments and Reauthorization Act of 1986).

PC: 84863
F NUMBER: N0024A

MATERIAL SAFETY DATA SHEET

ISOPROPYL ALCOHOL (99%)

MSDS No. HCR000125

Rev. Date 11/03/92

EXHIBIT "B"-10

ARCO CHEMICAL COMPANY
3801 WEST CHESTER PIKE
NEWTOWN SQUARE, PA. 19073

F List

IMPORTANT: Read this MSDS before handling and disposing of this product and pass this information on to employees, customers, and users of this product

This product is covered by the OSHA Hazard Communication Rule and this document has been prepared in accord with the MSDS requirements of the rule.

I. General

Trade Name	ISOPROPYL ALCOHOL 99%
Other Names	DIMETHYL CARBINOL; IPA; 2-PROPANOL; ISOPROPANOL;

Telephone Numbers
EMERGENCY
800/424-9300 CHEMTREC
215/353-8300 ARCO CHEM
CUSTOMER SERVICE
800/321-7000 INFO ONLY

Chemical Family	ALIPHATIC ALCOHOL
Generic Name	C3 ALCOHOL

DOT Hazardous Materials Proper Shipping Name
ISOPROPANOL

DOT Hazard Class
3 (FLAMMABLE LIQUID)

CAS No. SEE SECTION IX	**Company ID No.** E000012500	**UN/NA ID No.** UN 1219

II. Summary of Hazards

DANGER

SEE SUPPLEMENT BEGINNING ON PAGE 6

PHYSICAL HAZARDS: EXTREMELY FLAMMABLE LIQUID

ACUTE HEALTH EFFECTS (SHORT-TERM):
SEVERE EYE IRRITANT
SLIGHT INHALATION HAZARD
SLIGHT INGESTION HAZARD
NO SKIN ABSORP. HAZARD IDENTIFIED FROM DATA FOUND
NO SKIN IRRIT. HAZARD IDENTIFIED FROM DATA FOUND

CHRONIC HEALTH EFFECTS (LONG-TERM): CHRONIC OVEREXPOSURE TO ISOPROPANOL CAN BE IRRITATING TO MUCOSAL MEMBRANES. SEE SUPPLEMENTAL SHEET FOR ADDITIONAL CHRONIC HEALTH HAZARD INFORMATION.

III. Fire and Explosion

Flash Point (Method) AP 53°F (CC)	**Autoignition Temperature (Method)** AP 750°F	Flammable Limits (% Vol. in Air) At Normal Atmospheric Temperature and Pressure **Lower** AP 2 **Upper** AP 12

Fire and Explosion Hazards: RELEASES FLAMMABLE VAPORS BELOW NORMAL AMBIENT TEMPERATURES. WHEN MIXED WITH AIR AND EXPOSED TO IGNITION SOURCE, VAPORS CAN BURN IN OPEN OR EXPLODE IF CONFINED. VAPORS MAY BE HEAVIER THAN AIR. MAY TRAVEL LONG DISTANCES ALONG GROUND BEFORE IGNITING/FLASHING BACK TO VAPOR SOURCE. DILUTING WITH WATER MAY NOT SUFFICE TO RAISE FLASH POINT ABOVE AMBIENT TEMPERATURES.

Extinguishing Media:
DRY CHEMICAL
CO2
WATERSPRAY
FOAM FOR ALCOHOLS
WATER FOG

0031-0150

Special Firefighting Procedures: DO NOT ENTER FIRE AREA WITHOUT PROPER PROTECTION (SEE "DECOMPOSITION PRODUCTS POSSIBLE"). FIGHT FIRE FROM SAFE DISTANCE/PROTECTED LOCATION. HEAT MAY BUILD PRESSURE/RUPTURE CLOSED CONTAINERS, SPREADING FIRE, INCREASING RISK OF BURNS/INJURIES. WATER MAY BE INEFFECTIVE IN FIREFIGHTING DUE TO LOW FLASH POINT. USE WATER SPRAY/FOG FOR COOLING. EVEN IF MATERIAL IS WATER SOLUBLE, MAY NOT BE PRACTICAL TO EXTINGUISH FIRE BY WATER DILUTION. NOTIFY AUTHORITIES IF LIQUID ENTERS SEWER/PUBLIC WATERS.

IV. Health Hazards

SEE SUPPLEMENT BEGINNING ON PAGE 6

Summary of Acute Hazards: MODERATE HEALTH HAZARD - SEE BELOW FOR ROUTE-SPECIFIC DETAILS.

ROUTE OF EXPOSURE	SIGNS AND SYMPTOMS	Primary Route(s)
Inhalation	PROLONGED OVEREXPOSURE MAY CAUSE COUGHING, SHORTNESS OF BREATH, DIZZINESS AND INTOXICATION.	[x]
Eye Contact	MAY CAUSE SEVERE EYE IRRITATION.	[x]
Skin Absorption	NO SIGNIFICANT SIGNS OR SYMPTOMS INDICATIVE OF ANY HEALTH EFFECT ARE EXPECTED TO OCCUR AS A RESULT OF SKIN ABSORPTION EXPOSURE.	[ ]
Skin Irritation	NO SIGNIFICANT SIGNS OR SYMPTOMS INDICATIVE OF ANY ADVERSE HEALTH HAZARD ARE EXPECTED TO OCCUR AS A RESULT OF SKIN EXPOSURE.	[ ]
Ingestion	THIS MATERIAL MAY BE A SLIGHT HEALTH HAZARD IF INGESTED IN LARGE QUANTITIES.	[ ]

Summary of Chronic Hazards and Special Health Effects: CHRONIC OVEREXPOSURE CAN BE IRRITATING TO MUCOSAL MEMBRANES. SEE SUPPLEMENTAL SHEET FOR ADDITIONAL CHRONIC HEALTH HAZARD INFORMATION.

THIS MATERIAL OR ITS EMISSIONS MAY AFFECT MUCOUS TISSUE AND/OR AGGRAVATE MUCOUS MEMBRANE DYSFUNCTION.

V. Protective Equipment and Other Control Measures

Respiratory: IF EXPOSURE EXCEEDS THE PEL/TLV, USE NIOSH/MSHA APPROVED RESPIRATORY PROTECTION EQUIPMENT AS SPECIFIED IN THE NIOSH/OSHA 1981 OCCUPATIONAL HEALTH GUIDELINES FOR CHEMICAL HAZARDS.

Eye: EYE PROTECTION, INCLUDING BOTH CHEMICAL SPLASH GOGGLES AND FACE SHIELD, MUST BE WORN WHEN POSSIBILITY EXISTS FOR EYE CONTACT DUE TO SPRAYING LIQUID OR AIRBORNE PARTICLES. CONTACT LENSES MUST NOT BE WORN.

Skin: NOT NORMALLY CONSIDERED A SKIN HAZARD.WHERE USE CAN RESULT IN SKIN CONTACT, PRACTICE GOOD PERSONAL HYGIENE. WASH HANDS AND OTHER EXPOSED AREAS WITH MILD SOAP AND WATER BEFORE EATING, DRINKING, SMOKING AND WHEN LEAVING WORK.

Engineering Controls: NO SPECIAL VENTILATION IS USUALLY REQUIRED TO MEET EXPOSURE STANDARD(S) BEYOND THAT NEEDED FOR NORMAL COMFORT CONTROL.

Other Hygienic and Work Practices: EMERGENCY EYE WASH FOUNTAINS AND SAFETY SHOWERS SHOULD BE AVAILABLE IN THE IMMEDIATE VICINITY OF ANY POTENTIAL EXPOSURE.

USE GOOD PERSONAL HYGIENE PRACTICES. WASH HANDS BEFORE EATING, DRINKING, SMOKING, OR USING TOILET FACILITIES. PROMPTLY REMOVE SOILED CLOTHING/WASH THOROUGHLY BEFORE REUSE. SHOWER AFTER WORK USING PLENTY OF SOAP AND WATER.

VI. Occupational Exposure Limits

Substance	Source	Date	Type	Value/Units	Time
ISOPROPYL ALCOHOL	ACGIH	1992	TWA	400 PPM	8 HRS
			STEL	500 PPM	15 MIN
	OSHA	1989	TWA	400 PPM	8 HRS
			STEL	500 PPM	15 MIN

VII. Emergency and First Aid

Inhalation	IF OVERCOME BY EXPOSURE, REMOVE VICTIM TO FRESH AIR IMMEDIATELY. GIVE OXYGEN OR ARTIFICIAL RESPIRATION AS NEEDED. OBTAIN EMERGENCY MEDICAL ATTENTION. PROMPT ACTION IS ESSENTIAL.
Eye Contact	IN CASE OF EYE CONTACT, IMMEDIATELY RINSE WITH CLEAN WATER FOR 20-30 MINUTES. RETRACT EYELIDS OFTEN. OBTAIN EMERGENCY MEDICAL ATTENTION.
Skin Contact	REMOVE CONTAMINATED CLOTHING AS NEEDED. WASH SKIN THOROUGHLY WITH MILD SOAP/WATER. FLUSH WITH LUKEWARM WATER FOR 15 MINUTES. IF STICKY, USE WATER-LESS CLEANER FIRST.
Ingestion	IF LARGE QUANTITY SWALLOWED, GIVE LUKEWARM WATER (PINT) IF VICTIM COMPLETELY CONSCIOUS/ALERT. DO NOT INDUCE VOMITING/RISK OF DAMAGE TO LUNGS EXCEEDS POISONING RISK. OBTAIN EMERGENCY MEDICAL ATTENTION.
Emergency Medical Treatment Procedures	IF PAIN, BLINKING, TEARS, OR REDNESS CONTINUE, PATIENT SHOULD CONTACT OPTHALMOLOGIST. TREAT SYMPTOMATICALLY.

VIII. Spill and Disposal

Precautions If Material is Spilled or Released	EXTREMELY FLAMMABLE LIQUID. RELEASE CAUSES IMMEDIATE FIRE/EXPLOSION HAZARD. LIQUIDS/VAPORS MAY IGNITE. EVACUATE/LIMIT ACCESS. EQUIP RESPONDERS WITH PROPER PROTECTION. EXTINGUISH ALL IGNITION SOURCES. STOP RELEASE. PREVENT FLOW TO SEWERS/PUBLIC WATERS. RESTRICT WATER USE FOR CLEANUP.NOTIFY FIRE/ENVIRONMENTAL AUTHORITIES. IMPOUND/RECOVER LARGE LAND SPILL. BLANKET WITH FIREFIGHTING FOAM. SOAK UP SMALL SPILL WITH INERT SOLIDS. USE SUITABLE DISPOSAL CONTAINERS. ON WATER, MATERIAL IS SOLUBLE AND MAY FLOAT OR SINK. MAY BIODEGRADE. CONTAIN AND MINIMIZE DISPERSION; COLLECT. DISPERSE RESIDUE. REPORT PER REGULATORY REQUIREMENTS.
Waste Disposal Methods	CONTAMINATED PRODUCT/SOIL/WATER MAY BE RCRA/OSHA HAZARDOUS WASTE DUE TO POTENTIALLY LOW FLASH POINT (SEE 40 CFR 261 AND 29 CFR 1910). LANDFILL SOLIDS AT PERMITTED SITES. USE REGISTERED TRANSPORTERS. BURN CONCENTRATED LIQUIDS IN SYSTEMS COMPATIBLE WITH WATER SOLUBLE WASTES. AVOID FLAMEOUTS. ASSURE EMISSIONS COMPLY WITH APPLICABLE REGULATIONS. DILUTE AQUEOUS WASTE MAY BIODEGRADE. AVOID OVERLOADING/POISONING PLANT BIOMASS. ASSURE EFFLUENT COMPLIES WITH APPLICABLE REGULATIONS.

IX. Components (This may not be a complete list of components)

Component Name	CAS No.	Carcinogen##		Composition amount (Wt.) (See Qualification on Page 4)
ISOPROPYL ALCOHOL	67-63-0	N/AP	AP	99 PERCENT

Compositions given are typical values, not specifications.

##Listed By: 1 = NTP, 2 = IARC, 3 = OSHA, 4 = Other

X. Physical and Chemical Data

Boiling Point AP 180°F	**Viscosity Units, Temp. (Method)** N/DA		**Dry Point** N/DA
Freezing Point AP -127°F	**Vapor Pressure** (MM HG AT 20°C) AP 33		**Volatile Characteristics** APPRECIABLE
Specific Gravity (H_2O =1 at 39.2°F) AP 0.78 20°C/ 20°C	**Vapor Sp. Gr. (Air = 1.0 at 60° - 90 °F)** AP 2.1	**Solubility in Water** COMPLETE	**pH** N/DA
Hazardous Polymerization NOT EXPECTED TO OCCUR	**Other Chemical Reactivity** N/P		**Stability** STABLE

Other Physical and Chemical Properties THE ODOR THRESHOLD FOR ISOPROPYL ALCOHOL IS APPROXIMATELY 200 PPM

Appearance and Odor CLEAR, COLORLESS LIQUID WITH MEDICINAL ODOR ANALOGOUS TO RUBBING ALCOHOL.

Conditions to Avoid HIGH TEMPERATURES; STRONG OXIDIZING CONDITIONS

Materials to Avoid STRONG OXIDIZERS, OPEN FLAMES/SPARKS, ALUMINUM METAL, NITROFORM, OLEUM

Hazardous Decomposition Products INCOMPLETE COMBUSTION MAY YIELD CARBON MONOXIDE AND OTHER TOXIC GASES.

XI. Additional Precautions

Handling, Storage and Decontamination Procedures STORE IN TIGHTLY CLOSED/PROPERLY VENTED CONTAINERS AWAY FROM HEAT, SPARKS, OPEN FLAME AND STRONG OXIDIZING AGENTS. USE ONLY NON-SPARKING TOOLS. STORE DRUMS WITH BUNG IN UP POSITION. CAREFULLY VENT INTERNAL PRESSURE BEFORE REMOVING CLOSURE. CONTAINERS MUST BE GROUNDED BEFORE BEGINNING TRANSFER. ELECTRICAL EQUIPMENT SHOULD CONFORM TO NATIONAL ELECTRIC CODE. HANDLE EMPTY CONTAINERS WITH CARE BECAUSE OF FLAMMABLE VAPOR RESIDUE. MATERIAL MAY ATTACK SOME FORMS OF PLASTIC, ALUMINUM, RUBBER AND COATINGS.

ISOLATE, VENT, DRAIN, WASH AND PURGE SYSTEMS OR EQUIPMENT BEFORE MAINTENANCE OR REPAIR. REMOVE ALL IGNITION SOURCES. CHECK ATMOSPHERE FOR EXPLOSIVENESS AND OXYGEN DEFICIENCIES. USE ADEQUATE PERSONAL PROTECTIVE EQUIPMENT. OBSERVE PRECAUTIONS PERTAINING TO CONFINED SPACE ENTRY.

General Comments

SOME OF THE INFORMATION PRESENTED AND CONCLUSIONS DRAWN HEREIN ARE FROM SOURCES OTHER THAN DIRECT TEST DATA ON THE PRODUCT ITSELF.

- - - Note - - - Qualifications:

EQ = Equal	AP = Approximately	N/P = No Applicable Information Found
LT = Less Than	UK = Unknown	N/AP = Not Applicable
GT = Greater Than	TR = Trace	N/DA = No Data Available

XII. Regulatory Information

SEE SUPPLEMENT
BEGINNING ON PAGE 6

SUPERFUND AMENDMENTS AND REAUTHORIAZATION ACT OF 1986 (SARA), TITLE III

SECTION 311/312 HAZARD CATEGORIES

IMMEDIATE (ACUTE) HEALTH HAZARD — FIRE HAZARD

SECTION 313

NO CHEMICALS IN THIS PRODUCT EXCEED THE DE MINIMUS REPORTING LEVEL ESTABLISHED BY SARA TITLE III, SECTION 313 AND 40 CFR 372.

TOXIC SUBSTANCES CONTROL ACT (TSCA)

ALL COMPONENTS OF THIS PRODUCT ARE LISTED ON THE TSCA INVENTORY.

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA)

NO CHEMICALS IN THIS PRODUCT ARE SUBJECT TO THE REPORTING REQUIREMENTS OF CERCLA.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986 - PROPOSITION 65

BASED ON INFORMATION CURRENTLY AVAILABLE, THIS PRODUCT IS NOT KNOWN TO CONTAIN ANY CHEMICALS CURRENTLY LISTED AS CARCINOGENS OR REPRODUCTIVE TOXINS UNDER CALIFORNIA PROPOSITION 65 AT LEVELS WHICH WOULD BE SUBJECT TO THE PROPOSITION. IF YOU REFORMULATE OR FURTHER PROCESS THIS PRODUCT, YOU SHOULD FURTHER EVALUATE THIS PRODUCT BASED UPON SUCH REFORMULATION OR PROCESSING, AS WELL AS UPON ITS FINAL COMPOSITION AND USE.

XIII. Label Information

Manufacturer: ARCO CHEMICAL COMPANY
3801 WEST CHESTER PIKE
NEWTOWN SQUARE, PA. 19073

Telephone Numbers
EMERGENCY
800/424-9300 CHEMTREC
215/353-8300 ARCO CHEM
CUSTOMER SERVICE
800/321-7000 INFO ONLY

Use Statement: FOR INDUSTRIAL USE ONLY
KEEP OUT OF REACH OF CHILDREN

Signal Word: DANGER

Physical Hazards:
EXTREMELY FLAMMABLE

Health Hazards:
INHALATION HAZARD
INGESTION HAZARD
SEVERE EYE IRRITANT

Precautionary Measures:
DO NOT TASTE/SWALLOW.
DO NOT STORE IN ALUMINUM CONTAINERS.
DO NOT HANDLE NEAR HEAT, SPARKS, OR OPEN FLAME.
KEEP CONTAINER CLOSED WHEN NOT IN USE.
DO NOT STORE NEAR COMBUSTIBLE MATERIALS.
AVOID CONTACT WITH EYES.
AVOID PROLONGED OR REPEATED BREATHING OF VAPOR.
USE WITH ADEQUATE VENTILATION.
PREVENT CONTACT WITH FOOD, CHEWING, OR SMOKING MATERIALS.

DOT Information:
UN/NA ID Number- UN 1219
Hazard Class- 3 (FLAMMABLE LIQUID)
Proper Shipping- ISOPROPANOL

Component Name	CAS Number
ISOPROPYL ALCOHOL	67-63-0

Instructions:
In case of fire, use- DRY CHEMICAL, WATER FOG, CO_2, WATERSPRAY

First Aid -Inhalation IF OVERCOME BY EXPOSURE, REMOVE VICTIM TO FRESH AIR IMMEDIATELY. GIVE OXYGEN OR ARTIFICIAL RESPIRATION AS NEEDED. OBTAIN EMERGENCY MEDICAL ATTENTION. PROMPT ACTION IS ESSENTIAL.

-Eye Contact IN CASE OF EYE CONTACT, IMMEDIATELY RINSE WITH CLEAN WATER FOR 20-30 MINUTES. RETRACT EYELIDS OFTEN. OBTAIN EMERGENCY MEDICAL ATTENTION.

-Skin Contact REMOVE CONTAMINATED CLOTHING AS NEEDED. WASH SKIN THOROUGHLY WITH MILD SOAP/WATER. FLUSH WITH LUKEWARM WATER FOR 15 MINUTES. IF STICKY, USE WATER-LESS CLEANER FIRST.

-Ingestion IF LARGE QUANTITY SWALLOWED, GIVE LUKEWARM WATER (PINT) IF VICTIM COMPLETELY CONSCIOUS/ALERT. DO NOT INDUCE VOMITING/RISK OF DAMAGE TO LUNGS EXCEEDS POISONING RISK. OBTAIN EMERGENCY MEDICAL ATTENTION.

In case of spill, EXTREMELY FLAMMABLE LIQUID. RELEASE CAUSES IMMEDIATE FIRE/EXPLOSION HAZARD. EXTINGUISH ALL IGNITION SOURCES. IMPOUND/RECOVER LARGE LAND SPILL; SOAK UP SMALL SPILL. ON WATER, MAY BIODEGRADE. CONTAIN/MINIMIZE DISPERSION/COLLECT. REPORT PER REGULATORY REQUIREMENTS.

0031-0155

Protective Equipment:
-Respiratory USE NIOSH/MSHA APPROVED AIR-PURIFYING OR SUPPLIED AIR RESPIRATOR AS APPROPRIATE.

-Eye BOTH CHEMICAL SPLASH GOGGLES AND FACE SHIELD.

-Skin NO SPECIAL CLOTHING NORMALLY REQUIRED. WHERE USE CAN RESULT IN SKIN CONTACT, WASH THOROUGHLY BEFORE EATING, DRINKING, SMOKING, OR LEAVING WORK.

XIV. Supplement

CHRONIC HEALTH HAZARDS-SECTION II AND IV

ONE OF THE COMPONENTS OF THIS PRODUCT (ISOPROPYL ALCOHOL) HAS BEEN REPORTED IN ONE STUDY TO BE FETOTOXIC AT LEVELS OF 2.5% IN DRINKING WATER. NO TERATOGENIC EFFECTS WERE, OR HAVE BEEN, REPORTED. THERE ARE NO REPORTS OF ADVERSE REPRODUCTIVE EFFECTS IN HUMANS EXPOSED TO THIS CHEMICAL.

0031-0156

XIV. Supplement Continued

EXHIBIT "B"- 11

Date Printed--> 5/14/90 Material Safety Data Sheet For Page 1
Product-->53314ND 460# DRM Monoethanolamine PB MSDS#-->TEX MEA

Manufacturers Name & Address-->

Texaco Chemical Company
4800 Fournace Place
PO Box 430
Bellaire, Texas 77401-0000

Emergency Telephone--> (409)722-8381

-OR-
For Chemical Emergency -
Exposure, or Accident
Call CHEMTREC - Day or Night
(800)424-9300

Section I - Product Identification

Chemical Name-------->Alkanolamine
Product/Trade Name-->75090 Monoethanolamine, MEA
Chemical Family------>Alkanolamine
Synonyms------------->75090 Monoethanolamine, MEA
CAS Registry #------->141-43-5
Monoethanolamine
Formula-------------->
No data listed

Manufacturers Product Code--> 75090 MSDS#--> 75090
Effective Date--> 1/18/88 F E Bently Coordinator
For Further Information Call--> (000) -0000

Hazard Designations-->	-HMIS-	-NFPA-	
	======	======	
Health-->	3	2	0 = Minimal
Flammability-->	1	1	1 = Slight
Reactivity-->	0	0	2 = Moderate
Protective Equipment Or Specific Hazard-->			3 = Serious 4 = Severe

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Section II - Hazardous Ingredients/Identity Information

Ingredients-Not Specifications	Percent	TLV (Units)
Ethanol, 2-amino- CAS # 141-43-5	100.00	3 ppm TWA 3 ppm PEL OSHA 6 ppm STEL ACGIH

Hazardous according to OSHA 1910.1200 or one or more state Right-To-Know lists

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Section III - Physical/Chemical Characteristics

Boiling Point-->	339 F	Not listed C
Freezing Point-->	Not listed F	Not listed C
Melting Point-->	Not listed F	Not listed C
Vapor Pressure-->	0.2 mm Hg	

Vapor Density(Air=1)-->2.1

Solubility In Water--> soluble

Sp Gravity(Water=1)--> 1.02
% Volatile By Volume-->Nil

0031-0158

Evaporation Rate--> (=1) 1
% of Undiluted Product-->11.8
State--> Gas- Solid- Liquid-X
Viscosity--> 24.1 cP @ 20C
Product Density--> No data listed
Other Information--> No data listed
Molecular Weight--> No data listed
Appearance and Odor--> Clear liquid, mild ammoniacal odor

Section IV - Fire & Explosion Hazard Data

Flash Point(Method Used)-->
204 F(PMCC)

Flammable Limits-->Lower--5
Upper--17
Fire Extinguishing Media-->
According to the National Fire Protective Association Guide, use water spray, dry chemical, foam, or carbon dioxide.
Special Fire Fighting Procedures-->
Water or foam may cause frothing. Use water to cool fire-exposed containers. If a leak or spill has not ignited, use water spray to disperse the vapors and to provide protection for persons attempting to stop the leak.
Unusual Fire & Explosion Hazards-->
None
Autoignition Temp--> N.D. F N.D. C

Section V - Health Hazard Data

Threshold Limit Value-->
3 ppm averaged over an 8-hour daily exposure (ACGIH, 1987-88)
3 ppm PEL (OSHA)
Health Hazards-->
Acute
Eyes--Believed to be extremely irritating with possible permanent eye injury.
Skin--Believed to be corrosive; expected to cause severe skin damage with burns and blistering.
Respiratory System--May cause irritation of upper respiratory tract.
Chronic--See Section X - Additional Information

Emergency & First Aid Procedures-->
Eyes--Flush thoroughly with water for at least 15 minutes. Get immediate medical attention.
Skin--If drenched, remove contaminated clothing under safety shower and flood exposed areas with water. Get immediate medical attention. Wash clothing before reuse.
Ingestion--Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.
Inhalation--Should symptoms noted under Health Hazards occur, remove to fresh air. If not breathing, apply artificial respiration.
Other Instructions--None
Signs & Symptoms Of Exposure-->

No data listed
Sensitization Properties
Skin -- Unknown
Respiratory -- Unknown

Medical Conditions Generally Aggravated By Exposure-->
No data lsited

Toxicological Data-->
Median Lethal Dose (LD50 LC50) (Species)
Oral - Believed to be 1-2 g/kg (rat); slightly toxic
Inhalation - N.D.
Dermal - 1 g/kg (rabbit); slightly toxic
Other - N.D.
Irritation Index, Estimation of Irritation (Species)
Skin - Believed to be 6.6-8.0/8.0 (rabbit); corrosive
Eyes--Believed to be 80-110/110 (rabbit);
extremely irritating
Symptoms of Exposure -- See Health Hazards
Aquatic toxicity rating - TLM 96 hour = 100-1000 ppm;
practically non-toxic.

Section VI - Reactivity Data

Stability--> Stable-X Unstable-
Conditions to Avoid-->
No data listed

Incompatability (Materials to Avoid)-->
Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer causing nitrosamines could be formed.

Hazardous Combustion Or Decomposition Products-->
Ammonia, carbon monoxide, and carbon dioxide may be formed on burning in limited air supply.

Hazardous Polymerization--> May Occur- Will Not Occur-X
Conditions to Avoid-->
No data listed

Section VII - Spill, Leak, and Waste Disposal Procedures

Spill Control Methods-->
Avoid all personal contact. Contain spill if possible. Wipe up or absorb on suitable material and shovel up.

Waste Disposal Methods-->
Under RCRA, it is the responsibility of the user of products to determine, at the time of disposal, whether product meets RCRA criteria for hazardous waste. This is because product uses, transformations, mixture, processes, etc. may render the resulting material hazardous.
Waste Classification--Product has been evaluated for RCRA characteristics and does not meet criteria of a hazardous waste if discarded in its purchased form.

Section VIII - Special Protection Information

Respiratory Protection-->
Supplied air respiratory protection for cleaning large spills or upon entry into tanks, vessels, or other confined spaces.

Ventilation-->
Local exhaust ventilation recommended.

Personal Protection-->
Eyes--Chemical type goggles with face shield must be worn.
Do not wear contact lenses.
Skin--When handling large quantities subject to splashes and spills, impervious suits, gloves and rubber boots must be worn.

Work Practices/Hygiene-->
DANGER! CAUSES SEVERE EYE AND SKIN BURNS
MAY CAUSE BLINDNESS
HARMFUL IF SWALLOWED
Do not get in eyes, on skin or clothing
Avoid breathing vapor or mist
Keep container closed
Use only in well-ventilated locations
Wash thoroughly after handling

Section IX - Special Precautions

Handling & Storage-->
Minimum feasible handling temperatures should be maintained.
Periods of exposure to high temperatures should be minimized
Water contamination should be avoided.

Other Precautions-->
CAUTION! Misuse of empty containers can be hazardous.
Empty containers can be hazardous if used to store toxic, flammable or reactive materials. Cutting or welding of empty containers might cause fire, explosion or toxic fumes fom residues. Do not pressurize or expose to open flame or heat. Keep container closed and drum bungs in place.

Precautionary Label-->
75090 MONOETHANOLAMINE MEA
DANGER! CAUSES SEVERE EYE AND SKIN BURNS
MAY CAUSE BLINDNESS
HARMFUL IF SWALLOWED
Do not get in eyes, on skin or clothing
Avoid breathing vapor or mist
Keep container closed
Use only in well-ventilated locations
Wash thoroughly after handling
In case of contact, immediately flush eyes and skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes
Call a doctor
If swallowed, DO NOT induce vomiting - Call a doctor
CORROSIVE MATERIAL

Section X - Additional Information

Additional Information-->
State of Michigan Critical Materials Act (Revised 1987)
No critical materials present.
Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer-causing nitrosamines could be formed.

Section XI - Regulations and Transportation

Proper Ship Name-->Monoethanolamine
Hazard Class--> 8 Packing Group--> III
UN/NA #--> UN2491 Spetial Prov--> T7
Hazard Name--> Corrosive Material
Label/Placard--> Corrosive
EPA--> RQ--> N .00 Pounds
Emergency Response Guide #--> 60 Cargo Class #--> 08
Messages-->
Freight Class--> Monoethanolamine
LTL--60 TL--35 MW--40000

Title III Information-->
TPQ--> N 00 Pounds
SARA Substance--> Amines
Generic Class--> C10
SARA Tier I/II--> Acute--X Chronic--X Fire-- Pres-- React--

Section XII - State Right-to-Know Laws

Rhode Island Hazardous Substance RTK Law--> Applies As Follows
Toxic Substance-->Monoethanolamine
Hazard Warnings--> T-ACGIH * F-NFPA *
Connecticut Public Act #82-251 Effective 7/83-->Applies As Follows
Toxic Substance-->Ethanolamine
Massachusetts Hazardous Substance RTK Law--> Applies As Follows
2-OSHA
4-ACGIH 5-NFPA49 6-NFPA325M

Section XIII - Distributor

John R Hess & Sons, Inc
PO Box 2096
Edgewood Station
Providence, Rhode Island
02905-0096

(401)785-9300

Rhode Island Division
John R Hess & Sons, Inc
400 Station Street
Cranston, Rhode Island
02910-0000

(800)556-2850

or * Indicates a Registered name or Trademark of the Manufacturer.

Consult the Manufacturer for further information.

Manufacturer's Statement-->
NOTE--No representation is made as to the accuracy of the information herein.
N.D. - Not Determined N.A. - Not Applicable
< - Less Than > - Greater Than

CAUTION--Misuse of empty containers can be hazardous. Empty containers can be hazardous if used to store toxic, flammable, or reactive materials. Cutting or welding of empty containers might cause fire, explosion, or toxic fumes from residues. Do not pressurize or expose to open flame or heat. Keep container closed and drum bungs in place.

Health Emergency Telephone # (914) 831-3400 (Ext 204)

For additional information concerning --
Fuels/Lubricants/Antifreezes
Call (914) 831-3400 (Ext 204)
Chemicals/Additives
Call (409) 722-8381
Transportation Spills
Call CHEMTREC (800) 424-9300

To determine applicability or effect of any law or regulation with respect to the product, users should consult his legal advisor or appropriate government agency. Texaco does not underatke to furnish advise on such matters.

The information contained herein is believed to be accurate. It is provided independently of any sale of the product as part of Texaco's Product Safety Program. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein. Data Sheets are available for all Texaco products. You are urged to obtain data sheets for all Texaco products you buy, process, use or distribute and you are encouraged and requested to advise those who may come in contact with such products of the information contained herein.

MATERIAL SAFETY DATA SHEET

ALBRIGHT & WILSON Americas

Date-Issued: 12/05/1995

MSDS Ref. No: PSMSD-291

Date-Revised: 08/22/1997

Revision No: 1

Amgard TBEP

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Amgard TBEP
GENERAL USE: Industrial Chemical Intermediate
PRODUCT CODE: 291
PRODUCT FORMULATION NAME: Ethanol, 2-Butoxy-, Phosphate (3:1)
CHEMICAL FAMILY: Trialkyl Phosphates
GENERIC NAME: Tributoxy Ethyl Phosphate, TBEP

MANUFACTURER

Albright & Wilson Americas Inc.
Industrial Chemicals Division
P.O. Box 4439
Glen Allen, VA 23058-4439

Contact: Product Stewardship Department

Product Stewardship: (804) 968-6496

Transportation: (804) 968-6418

Customer Service: (804) 968-6300

Albright & Wilson Americas Limited - Canada
Industrial Chemicals Division
2070 Hadwen Road
Mississauga Ontario L5K 2C9

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC (800) 424-9300

Canutec (613) 996-6666

Emergency Phone (803) 554-1229

COMMENTS: To the best of our knowledge, this Material Safety Data Sheet conforms to the requirements of US OSHA 29 CFR 1910.1200, 91/155/EEC and Canadian Hazardous Products Act.

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS#	EINECS #
Ethanol,2-butoxy-, phosphate	~99	78-51-3	201-122-9

COMMENTS:

Not classified as DANGEROUS, no EU R risk phrase required.
Product composition ranges shown are typical values for health, safety and environmental use and are not intended as specifications.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Clear and colorless organic liquid with characteristic odor.

IMMEDIATE CONCERNS: Poses little or no immediate concerns.

POTENTIAL HEALTH EFFECTS

EYES: Not expected to cause significant irritation to the eyes.

SKIN: Not expected to cause significant irritation to the skin.

INGESTION: Not expected to cause significant irritation of the digestive tract.

INHALATION: Not expected to cause significant irritation of the lungs, upper respiratory tract or nose.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Redness and possible itching and/or tearing of the eyes.

SKIN: Possible redness and/or itching of the skin.

INGESTION: Possible nausea and/or vomiting.

INHALATION: Possible coughing, burning, tightness of chest and/or shortness of breath.

ACUTE TOXICITY:

Not expected to cause significant adverse effects if absorbed through the skin.
Not expected to cause significant adverse effects if ingested.
Not expected to cause significant adverse effects if mist or vapor is inhaled.

CARCINOGENICITY:

Not Listed by NTP
Not listed by IARC
Not listed by OSHA

MUTAGENICITY:

This product was tested to be negative in a laboratory test tube study.

REPRODUCTIVE TOXICTY

REPRODUCTIVE EFFECTS: Not Available

TERATOGENIC EFFECTS: Not Available

MEDICAL CONDITIONS AGGRAVATED: May aggravate anemia.

TARGET ORGAN STATEMENT: May cause liver, nervous system, stomach and skin damage based on animal data.

SENSITIZATION: This material may cause sensitization of the skin.

COMMENTS: For detailed toxicological information see Section 11.

4. FIRST AID MEASURES

EYES: Wash eyes with clean flowing water for two to three minutes. Remove any contact lenses and continue flushing for 15 minutes. If irritation occurs or persists, get medical attention.

SKIN: Remove contaminated clothing including shoes and wash skin with plenty of soap and water. If irritation occurs, seek medical advice. Wash contaminated clothing and shoes before reuse.

INGESTION: Wash out mouth with water and keep at rest. Seek medical attention.

INHALATION: Remove from further exposure. Keep warm and at rest. If cough or other symptoms develop, seek medical attention.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: 224°C (435°F)ASTM D92

FLAMMABLE LIMITS: Not Available

AUTOIGNITION TEMPERATURE: Not Available

FLAMMABLE CLASS: Nonflammable

FLAME PROPAGATION OR BURNING RATE OF SOLIDS: Not Applicable

GENERAL HAZARD: Evacuate personnel downwind of fire to avoid inhalation of irritating and/or harmful fumes and smoke.

EXTINGUISHING MEDIA: Chemical type foam, CO2 (Carbon Dioxide), Dry Chemical, Water Fog

HAZARDOUS COMBUSTION PRODUCTS: Oxides of both carbon and phosphorus

FIRE FIGHTING PROCEDURES: For small containers of organic substances, it should be considered if there will be less damage by allowing the material to burn to exhaustion rather than fighting the fire and risk causing environmental contamination and other problems.

FIRE FIGHTING EQUIPMENT: Respiratory and eye protection are required for fire

fighting personnel. Full protective equipment (Bunker Gear) and self contained breathing apparatus (SCBA) should be used for all indoor fires and any significant outdoor fires. For small outdoor fires, which may easily be extinguished with a portable fire extinguisher, use of a SCBA may not be required.

SENSITIVE TO STATIC DISCHARGE: Not Available

SENSITIVITY TO IMPACT: Not Available

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL:

Construct temporary dikes of dirt, sand, or any appropriate readily available material to prevent spreading of the material.

Wearing the appropriate personal protective equipment designated in Section 8, move the leaking container to a containment area or rotate the container so that the opening is above the liquid level.

Absorb on diatomaceous earth or equivalent inert material. Shovel up and dispose of at an appropriate waste disposal facility according to current applicable laws and regulations, and product characteristics at time of disposal.

LARGE SPILL:

Construct temporary dikes of dirt, sand, or any appropriate readily available material to prevent spreading of the material.

Wearing the appropriate personal protective equipment designated in Section 8, close or cap valves and/or block or plug hole in leaking container and transfer to another container.

Contain material as described above and call the local fire or police department for immediate emergency assistance.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: Use appropriate containment to avoid runoff or release to sewer or waterways.

LAND SPILL: Use appropriate containment to avoid runoff or release to ground.

GENERAL PROCEDURES: Remove containers of strong oxidizers from release area.

RELEASE NOTES: If spill could potentially enter any waterway, including intermittent dry creeks, contact the local authorities. If in the U.S., contact the US COAST GUARD NATIONAL RESPONSE CENTER toll free number 800-424-8802.

In case of accident or road spill notify:
CHEMTREC in USA at 800-424-9300
CANUTEC in Canada at 613-996-6666
CHEMTREC, other countries, at (International code)+1 202 483 7616

COMMENTS:

See Section 13 for disposal information and Section 15 for regulatory requirements.
Large and small spills may have a broad definition depending on the user's handling system. Therefore, the spill category must be defined at the point of release by technically qualified personnel.

7. HANDLING AND STORAGE

HANDLING:

Use appropriate personal protective equipment as specified in Section 8. Handle in a well ventilated area.

Handle and use in a manner consistent with good industrial/manufacturing techniques and practices.

STORAGE:

Store in unopened containers under cool and dry conditions.

Do not store with, or close to oxidizers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Good ventilation should be sufficient to control airborne levels of material.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear safety glasses with side shields or goggles when handling this material.

SKIN: To prevent any contact, wear impervious protective clothing such as neoprene or butyl rubber gloves, apron, boots or whole bodysuit, as appropriate.

RESPIRATORY: Always wear NIOSH approved respiratory protective equipment when there may be potential for airborne exposure.

WORK HYGIENIC PRACTICES: Facilities storing or using this material should be equipped with an eyewash facility and a safety shower.
Good personal hygiene practices should always be followed.

COMMENTS: This product contains no known OSHA hazardous ingredients per 29 CFR 1910.1200.

No PEL's, TLV's or OEL's for this product or it's ingredients are listed in the current issue of ACGIH's Guide to Occupational Exposure Values nor have they been determined by the manufacturer.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: Characteristic

L less

APPEARANCE: Clear

COLOR: Colorless

pH: Not Applicable

VAPOR PRESSURE: <0.1 mmHg at 20°C (68°F)

VAPOR DENSITY: Not Available

BOILING POINT: 222°C (435°F)@ 4 mmHg

FREEZING POINT: Not Available

MELTING POINT: Not Available

SOLUBILITY IN WATER: Negligible

EVAPORATION RATE: Not Available

DENSITY: 1.017 g/cc at 20°C (68°F)

SPECIFIC GRAVITY: 1.017 @ 20°C/4°C

VISCOSITY #1: <20CS at 40°C (104°F)

VISCOSITY #2: <99Saybolt Universal Seconds at 38°C (100°F)

MOLECULAR FORMULA: $C_{18}H_{39}O_7P$

MOLECULAR WEIGHT: 398.5 g/gmol

COEFF. OIL/WATER: Not Available

10. STABILITY AND REACTIVITY

STABLE: YES

HAZARDOUS POLYMERIZATION: NO

CONDITIONS TO AVOID: Heat.

STABILITY: The product is stable under normal ambient conditions of temperature and pressure.

POLYMERIZATION: Will not occur

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of both phosphorus and carbon and acids of phosphorus.

INCOMPATIBLE MATERIALS: Strong Oxidizers

11. TOXICOLOGICAL INFORMATION

ACUTE

DERMAL LD_{50}: 5000 mg/kg (rabbit)

ORAL LD_{50}: *10700 mg/kg (rat)*

INHALATION LC_{50}: 21 mg/l (1 hour)

EYE EFFECTS: This material is not expected to cause significant irritation to the eyes.

SKIN EFFECTS: This material is not expected to cause significant irritation to the skin.

SENSITIZATION: This material is a Grade I - Weak Skin Sensitizer.

TARGET ORGANS: Liver
Nervous System
Stomach
Skin

CARCINOGENICITY:

Listed by IARC - No

Listed by NTP - No

Listed by OSHA - No

MUTAGENICITY: Negative in the Ames Test.

REPRODUCTIVE EFFECTS: Not Available

TERATOGENIC EFFECTS: Not Available

GENERAL COMMENTS: Reported to be absorbed through the skin; neurotoxicity and liver toxicity may occur.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: May cause adverse environmental impact if material reaches waterways.

ECOTOXICOLOGICAL INFORMATION: Not Available

DISTRIBUTION: Not Available

CHEMICAL FATE INFORMATION: Not Available

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of waste at an appropriate waste disposal facility according to current applicable laws and regulations.

FOR LARGE SPILLS: Contain material and call local authorities for emergency assistance. In consultation with the appropriate authorities, determine the disposal method or contact Albright & Wilson Americas.

PRODUCT DISPOSAL: Dispose of at a supervised incineration facility or an appropriate waste disposal facility according to current applicable laws and regulations and product characteristics at time of disposal.

EMPTY CONTAINER: Rinse drums with a suitable solvent and steam to remove vapors before disposal or reuse in accordance with applicable regulations.

GENERAL COMMENTS: Refer to Section 6, Accidental Release Measures for additional information.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not restricted by DOT

TECHNICAL NAME: Ethanol, 2-Butoxy-, Phosphate

LABEL: Use Product Identifier, "Trade Name", with technical name below.

CANADA TRANSPORT OF DANGEROUS GOODS

PROPER SHIPPING NAME: Not restricted

LABEL: Use Product Identifier, "Trade Name", with technical name below.

AIR (ICAO/IATA)

PROPER SHIPPING NAME: Not restricted

LABEL: Use Product Identifier, "Trade Name", with technical name below.

VESSEL (IMO/IMDG)

PROPER SHIPPING NAME: Not restricted

LABEL: Use Product Identifier, "Trade Name", with technical name below.

EUROPEAN TRANSPORTATION:

ADR/RID HAZARD CLASSIFICATION: Not Regulated

U.S. CUSTOMS HARMONIZATION NUMBER: 2919.00.50.50

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND

REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES:

FIRE: NO **PRESSURE GENERATING:** NO **REACTIVITY:** NO **ACUTE:** NO **CHRONIC:** NO

313 REPORTABLE INGREDIENTS: Not Applicable

TITLE III NOTES: Not Applicable

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA RQ: Not Applicable

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA REGULATORY: All intentional ingredients are listed on the TSCA Inventory.

NATIONAL RESPONSE CENTER: U.S. Coast Guard National Center telephone # 1-800-424-8802

CANADA

WHMIS (WORKER HAZARDOUS MATERIALS INFORMATION SYSTEM): This product is not WHMIS controlled.

CANADA INGREDIENT DISCLOSURE LIST: This product does contain ingredient(s) on the "Ingredient Disclosure List".

CANADIAN ENVIRONMENTAL PROTECTION ACT: All intentional ingredients are listed on the DSL (Domestic Substance List).

EUROPEAN COMMUNITY

EUROPEAN COMMUNITY REGULATORY: All intentional ingredients are listed on the European's EINECS Inventory.

MEXICO

This product is not classified according to Mexican Standard, Instruction No. 9, ANNEX 1.

STATE REGULATIONS

Not Available

STATES WITH SPECIAL REQUIREMENTS

2-Butoxyethanol Massachusetts:Contains material that is present on Massachusetts Substance List at >= 1% or 0.1% for carcinogens.
New Jersey:Contains material present on New Jersey Right to Know Hazardous Substance List at >=1% and 0.1% for carcinogens.
Pennsylvania:Contains material present on Pennsylvania Hazardous Substance List present at >= 1%.

Rhode Island:Contains material present on Rhode Island Hazardous Substance List at >=1% and 0.01% for carcinogens, mutagens and teratogens.

REGULATIONS

LOCAL REGULATIONS: Not Available

COMMENTS: This chemical product is not classified as "dangerous" for supply based on current available information. No EEC symbol, R risk or S safety phrase is required on the label.

16. OTHER INFORMATION

REASON FOR ISSUE: New format with additional information.

APPROVED BY: William T. Stewart **TITLE:** Product Stewardship Manager

INFORMATION CONTACT: Product Stewardship Analyst

REVISION SUMMARY

This MSDS revision number was reset to #1 and replaces the June 09, 1997 issue.

NFPA CODES

FIRE: 1 **HEALTH:** 1 **REACTIVITY:** 1

HMIS CODES

FIRE: 1 **HEALTH:** 1 **REACTIVITY:** 1 **PROTECTION:** H

MANUFACTURER SUPPLEMENTAL NOTES:

HAZARD WARNING!This product belongs to a chemical family that HAS BEEN TESTED in combination with Trimethylolpropane , Trimethylolpropane derived products or their corresponding Trimethylolpropane homologs for toxicity of the thermal decomposition products in the absence of flame. Products in this chemical family PRODUCED OBSERVABLE ADVERSE HEALTH EFFECTS in laboratory animals. There is a possibility that this thermal decomposition produces bicyclic phosphates and/or phosphites. Bicyclic phosphates and phosphites have acute neurotoxic properties and may cause convulsive seizures in laboratory test animals. Therefore, this product should not be used in conjunction with Trimethylolpropane or Trimethylolpropane derived products unless tested to determine their decomposition toxicity. Follow all precautionary measures outlined in this Material Safety Data Sheet and/or contact Albright & Wilson Americas.

DATA SOURCES:

Acute Oral LD50 (rat), Biosearch/Mobil 9113-71
Acute Dermal LD50 (rabbit), MCTR 204-77/Mobil M2041-77
Acute Inhalation LC50 (rat), MCTR 204-77/Mobil M2042-77
Acute Dermal Irritation (rabbit), Biosearch/Mobil M9111-71
Acute Eye Irritation (rabbit), Biosearch/Mobil M9112-71
Mutagenicity, Ames, Litton/MCTR 204-77/Mobil M2043-77
Product Health Hazard Review by Consultant Toxicologist, Dr. R. V. Blanke

MANUFACTURER DISCLAIMER: Information given herein is offered in good faith as

accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control; all risks of use of the product are therefore assumed by the user. Nothing is intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.

ALBRIGHT & WILSON Americas

FAX

Date: 07 JAN 1999

Number of pages including cover sheet: 1

To: OILCHEM
LINCOLN, R.I.

ATTN: MEL

Phone: (401) 722-2410

Fax phone: (401) 727-0752

CC:

From: STEWART MILLER
ALBRIGHT & WILSON AMERICAS

Phone: 804-968-6325

Fax phone: 804-968-6573

REMARKS: ☐ Urgent ☒ For your review ☐ Reply ASAP ☐ Please comment

ALBRIGHT & WILSON AMERICAS
AMGARD TBEP PRODUCT CODE 927

THE ABOVE PRODUCT CONTAINS 2-BUTOXYETHANOL (CAS NO. 111-76-2) WHICH IS A VOLATILE ORGANIC CHEMICAL AS DEFINED BY THE EPA CLEAN AIR ACT.
THE % VOC'S IN TBEP IS < 1% and typically is ca 0.5%.

STEWART H MILLER
SNR P.S. ENGINEER

Section 1 - Manufacturers Information

EXHIBIT "B"-13

Section 1 -Manufacturer & Product Identification
Manufacturers Name & Address-->
Stepan Company
Northfield, Il
60093-0000

Medical

Emergency(800)228-5635
Chemtrec (800) 424-9300
-OR- For Chemical Emergency -
Exposure, or Accident
Call CHEMTREC - Day or Night
(800)424-9300

Chemical Name-------->
Myristalkonium Chloride & Quaternium 14
Product/Trade Name-->
BTC 2125M
Chemical Family----->
Quaternary
Synonyms---------->
No data listed
CAS Registry #------->
No data listed
No data listed
Formula---------->
No data listed

NO number

For Further Information Call-->(708)446-7500

Hazard Designations-->	-HMIS-	-NFPA-	
Health-->	2	2	0 = Minimal
Flammability-->	2	2	1 = Slight
Reactivity-->	0	0	2 = Moderate
Protective Equipment Or Specific Hazard-->			3 = Serious
			4 = Severe

Effective Date--> 5/23/90
Manufacturers Product Code-->133027 MSDS#-->133027

Section 2 - Ingredients/Product Composition

Section 2 -Ingredients/Composition

Ingredients-Not Specifications	Percent	TLV(Units)
Ethyl Alcohol, Denatured	3.00%	OSHA PEL 1000ppm
CAS # 64-17-5		ACGIH TLV 1000ppm

Section 3 - Physical Data

Section 3 -Physical Data
Boiling Point--> 212F 100C
Freezing Point-->Not ListedF Not Listed C
Melting Point-->Not ListedF Not ListedC
Vapor Pressure-->Estimated heavier than a
Vapor Density(Air=1)-->Not determined or unknown
Solubility In Water-->No data listed
Specific Gravity (Water=1)-->No data listed
Percent Volatile By Volume-->50%
Evaporation Rate-->(Ethyl Ether =Estimated slower than
Ph of Undiluted Product-->No data listed
State-->Gas- Solid- Liquid-X
Viscosity-->No data listed
Product Density-->No data listed
Other Information-->Weight Per Gallon -- 8.1 pounds

Molecular Weight-->No data listed
Appearance and Odor-->No data listed

Section 4 - Fire and Explosion Data

Section 4 -Fire & Explosion Hazard Data
Flash Point-->170 F, 77 C
Pensky-Martens Closed Cup
Flammable Limits-->
Lower-->4%
Upper-->19%
Fire Extinguishing Media-->
Dry chemical, carbon dioxide, foam, or water fog.
Class BC, ABC fire extinguisher.
Special Fire Fighting Procedures-->
Self-contained positive pressure breathing apparatus and protective clothing should be worn in fighting fires involving chemicals.
None known
Autoignition Temp-->Not ListedF Not ListedC

Section 5 - Reactivity Data

Section 5 -Reactivity Data
Stability--> Stable-X Unstable-
Conditions to Avoid-->
No data listed
Incompatability(Materials to Avoid)-->
Strong oxidizing agents
Hazardous Combustion Or Decomposition Products-->
Nitrous oxides and ammoniacal vapors
Hazardous Polymerization-->May Occur- Will Not Occur-X
Conditions to Avoid-->
No data listed

Section 6 - Health Hazard Data

Section 6 -Health Hazard Data
Threshold Limit Value-->
Refer to Section II - Ingredients
Health Hazards-->
Eyes--Contact with eyes is painful and irritating.
Skin--Prolonged or repeated contact with skin causes irritation.
Inhalation--Mist caused by manufacturing operations irritates nasal passages. Alcohol portion, which can be inhaled or absorbed, must be controlled below TLV.Prolonged inhalation of vapors causes nausea, loss of motor skills, and disorientation.
Ingestion--If swallowed, consult a physician immediately.
If any symptoms persist, consult a physician.
Signs & Symptoms Of Exposure-->
Unnecessary exposure to this product or any chemical should be avoided.
Medical Conditions Generally Aggravated By Exposure-->
Chronic effects and medical conditions aggravated by overexposure to this product have not been established.

Section 7 - First Aid Procedures

Section 7 -First Aid Procedures
Eyes--Flush eyes immediately with plenty of water for at least 15 minutes.
Skin--Wash off skin with water. Remove contaminated clothing and clean before reuse.
Inhalation--If vapors or mist cause irritation or distress, go to fresh air. Give oxygen or apply artificial respiration, if needed.
Ingestion--If swallowed, consult a physician immediately
Carcinogen--This product is not considered a carcinogen by OSHA, NTP, or IARC.

Section 8 - Spills and Disposal Information

Section 8 -Spill & Disposal Procedures
Spill Control Methods-->
Contain all spills and leaks to prevent discharge into the environment.
Ventilate area.
Small Spills--Soak up with absorbant, shovel into waste container, flush area with water.
Large Spills--Recover liquid for reprocessing or disposal.
Waste Disposal Methods-->
Recover material or dispose (incineration is perferred) in accordance with all applicable federal, state, and local regulations. Material collected with absorbant may be disposed in a permitted landfill in accordance with federal, state, and local regulations. Empty container may retain vapor or product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed.

Section 9 - Handling & Storage Data(Personel Protection)

Section 9 -Handling & Storage Precautions
Respiratory Protection-->
If vapors are present, use NIOSH or MSHA approved respirator for organic vapors, air-line respirator, or a self-contained breathing apparatus.
Ventilation-->
Use adequate ventilation to keep hazardous ingredients below their TLV.
Personal Protection-->
Eye Protection--Wear full face shield or goggles when handling.
Protective GLoves--Use impervious gloves.
Other Protective Equipment--Wear protective clothing to prevent repeated or prolonged contact.
Eye wash station and safety shower should be near work area.

Section 10 - Additional Information

Section 10-Additional Information

Additional Information->
No data listed.
Other Precautions-->
Spilled material is slippery.
Wash thoroughly after handling.
If ingested, call a physician.

Section 11 - Regulatory Information

Section 11-

Section 12 - Product Label

Section 12-Product Label -->
BTC 2125M 50% Quaternary
Myristalkonium Chloride & Quaternium 14
WARNING -- Combustible
Severely irritating to skin and eyes.
Avoid breathing vapors.
Avoid eye or skin contact.
Avoid open fire or flame
Keep containers closed
Use with adequate ventilation
Wash thoroughly after handling
If ingested, call a physician
Causes irritation
Contains Ethanol
* Trademark of Stepan Company

Section 6a- Toxicological Data

Section 6a-Toxicological Data
No data listed

Section 14 - Additional Regulatory Information

Section 14-

Section 15 - Miscellaneous Information

Section 15-Miscellaneous Information
Work Practices & Hygiene-->
No data Listed
Handling & Storage-->
Avoid open fire or flame.

Section 20 - Distributor

John R Hess & Company,Inc
400 Station Street
PO Box 3615
Cranston, Rhode Island
02910-0000

(401)785-9300

UNION CARBIDE CHEMICALS AND PLASTICS COMPANY INC
Industrial Chemicals Division

MATERIAL SAFETY DATA SHEET

EXHIBIT "B"- 17

EFFECTIVE DATE: 08/09/89

Union Carbide Chemicals and Plastics urges each customer or recipient of this MSDS to study it carefully to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology, and fire prevention, as necessary or appropriate to use and understand the data contained in this MSDS.

To promote safe handling, each customer or recipient should: (1) notify its employees, agents, contractors and others whom it knows or believes will use this material of the information in this MSDS and any other information regarding hazards or safety; (2) furnish this same information to each of its customers for the product; and (3) request its customers to notify their employees, customers, and other users of the product of this information.

I. IDENTIFICATION

PRODUCT NAME: TRIETHANOLAMINE, COMMERCIAL GRADE
CHEMICAL NAME:
Triethanolamine mixture
CHEMICAL FAMILY: Alkanolamines
FORMULA: Not Applicable
MOLECULAR WEIGHT: Not Applicable
SYNONYMS: Triethanolamine 85%; TEA 85
CAS # and Not Applicable
C NAME: Not Applicable (mixture)

not on Flist

II. PHYSICAL DATA (Determined on typical material)

BOILING POINT, 760 mm Hg: >250C (>482F) (Decomposes)
SPECIFIC GRAVITY(H2O =1): 1.126 at 20/20 C
FREEZING POINT: Approx. 16 C (Approx. 61 F)
VAPOR PRESSURE AT 20°C: <0.01 mm Hg
VAPOR DENSITY (air = 1): Approx. 4.8
EVAPORATION RATE
(Butyl Acetate = 1): <0.01
SOLUBILITY IN WATER by wt: 100% @ 20C
APPEARANCE AND ODOR: Water-white liquid; mildly ammoniacal odor.

EMERGENCY PHONE NUMBER: 1-800-UCC-HELP (Number available at all times)

UNION CARBIDE CHEMICALS AND PLASTICS COMPANY INC.
Industrial Chemicals Division
39 Old Ridgebury Road, Danbury, CT. 06817-0001

SKIN:
Remove contaminated clothing and wash skin with soap and water. Wash clothing before reuse.

INHALATION:
Remove to fresh air.

EYES:
Immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention promptly, preferably an ophthalmologist, urgently.

NOTES TO PHYSICIAN:
The hazards of this material are mainly due to its irritant properties on the skin and mucosal surfaces. There is no specific antidote, and treatment should be directed at the control of symptoms and the clinical condition.

VI. REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID:
This material may undergo a self-sustaining thermal decomposition when heated to temperatures above 350 degrees C.

INCOMPATIBILITY (materials to avoid):
Avoid contamination with strong acids, strong bases, strong oxidizing agents, aldehydes, ketones, acrylates, organic anhydrides and organic halides.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:
Burning can produce carbon monoxide and/or carbon dioxide, and nitrogen oxides.

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID:
None

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED
Wear suitable protective equipment; avoid contact with liquid and vapors! Collect for disposal. See Section IX.

WASTE DISPOSAL METHOD:
Incinerate in a furnace, where permitted under appropriate Federal, State, and local regulations. See Section IX.

VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type):
Self-contained breathing apparatus in high vapor concentrations.

VENTILATION:
This product should be confined within covered equipment, in which case general (mechanical) room ventilation is expected to be adequate. Special local ventilation is suggested at points where vapors can be expected to escape to the workplace air.

PROTECTIVE GLOVES:
PVC - coated or butyl

EYE PROTECTION:
Monogoggles

OTHER PROTECTIVE EQUIPMENT:
Eye bath, safety shower, and chemical apron

IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
WARNING! Harmful if swallowed.
Causes eye and skin irritation.
Repeated exposure may cause liver and kidney damage.
Do not swallow.
Avoid contact with eyes, skin, and clothing.
Keep container closed.
Use with adequate ventilation.
Wash thoroughly after handling.
FOR INDUSTRY USE ONLY

OTHER PRECAUTIONS:
DISPOSAL - Laboratory tests show that, at very low concentration (about 10 ppm), these ethanolamines can be degraded in a biological wastewater treatment system. It may be feasible to flush a small spill of ethanolamines to a sanitary sewer, with large amounts of water. However, a large spill might be detrimental to aquatic life. If spilled material cannot be collected, it may be possible to neutralize with dilute hydrochloric acid and then, landfill the resulting salt.

WARNING: Hot organic chemical vapors or mists are susceptible to sudden spontaneous combustion when mixed with air. Ignition may occur at temperatures below those published in the literature as "autoignition" or "ignition" temperatures. Ignition temperatures decrease with increasing vapor volume and vapor/air contact time, and are influenced by pressure changes.

Ignition may occur at typical elevated-temperature process conditions, especially in processes operating under vacuum if subjected to sudden ingress of air, or outside process equipment operating under elevated pressure if sudden escape of vapors or mists to the atmosphere occurs.

Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained.

X. REGULATORY INFORMATION

STATUS ON SUBSTANCE LISTS:

The concentrations shown are maximum or ceiling levels (weight %) to be used for calculations for regulations. Trade Secrets are indicated by "TS".

FEDERAL EPA

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQs) in 40 CFR 302.4.

Components present in this product at a level which could require reporting under the statute are:

*** None ***

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 311 and 312).

Components present in this product at a level which could require reporting under the statute are:

*** NONE ***

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are:

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Diethanolamine	111-42-2	15.0

STATE RIGHT-TO-KNOW

CALIFORNIA Proposition 65

This product does not contain materials which the State of California has found to cause, cancer, birth defects or other reproductive harm.

MASSACHUSETTS 105 CMR 670.000 Right-To-Know, Substance List (MSL)

Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

EXTRAORDINARILY HAZARDOUS SUBSTANCES (=> 0.0001%)

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
*** NONE ***		

HAZARDOUS SUBSTANCES (=> 1%)

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Diethanolamine	111-42-2	15.0
Triethanolamine	102-71-6	85.0

PRODUCT NAME: TRIETHANOLAMINE, COMMERCIAL GRADE

PENNSYLVANIA Right-To-Know, Hazardous Substance List
Hazardous Substances and Special Hazardous Substances on the List must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

HAZARDOUS SUBSTANCES (=> 1%)

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Diethanolamine	111-42-2	15.0
Triethanolamine	102-71-6	85.0

TSCA INVENTORY STATUS

The ingredients of this product are on the TSCA inventory.

CALIFORNIA RULE 443.1 VOC'S:
Not presently available

NOTE ----
The opinions expressed herein are those of qualified experts within Union Carbide Chemicals and Plastics Company. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and of these opinions and the conditions of the use of the product are not within the control of Union Carbide Chemicals and Plastics Company, it is the user's obligation to determine the conditions of safe use of the product.

Date: 10/31/88
Revision Date: 08/14/89 Printed in USA
Revised Sections
This MSDS was revised to include a warning statement on the potential for vapors and mists to spontaneously ignite under certain conditions. Refer to Section IX - Other Precautions.
PRODUCT: 88205
F NUMBER: N0130C

UNION CARBIDE CHEMICALS AND PLASTICS COMPANY INC.
Specialty Chemicals Division 39 Old Ridgebury Road, Danbury, CT 06817

October, 1989

Dear Customer:

We are writing this letter to advise you of a new warning which we are adding to the MSDS for most liquid organic chemicals. This warning relates to the potential for sudden spontaneous ignition of vapors and mists and was developed by our fire safety research laboratory.

This new warning has been added to Section IX, Special Precautions, of the MSDS. It states:

> "WARNING: Hot organic chemical vapors or mists are susceptible to sudden spontaneous combustion when mixed with air. Ignition may occur at temperatures below those published in the literature as "autoignition" or "ignition" temperatures. Ignition temperatures decrease with increasing vapor volume and vapor/air contact time and are influenced by pressure changes.
>
> Ignition may occur at typical elevated temperature process conditions, especially in process operating under vacuum if subjected to sudden ingress of air, or outside process equipment operating under elevated pressure if sudden escape of vapors or mists to the atmosphere occurs. Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained."

Essentially, this warning addresses potential hazards of organic product contained in (or leaking from) process equipment in areas free from ignition sources. Examples would include leaks from hot process equipment, and the sudden introduction of air into process organic liquids at elevated temperatures under vacuum. We recommend that you examine your particular processes to establish if an actual hazard exists.

We are adding this warning to the MSDS for any liquid organic product that has a flash point. Products purchased by you in the past two years which meet this criteria can be identified by referring to SECTION IV of the MSDS received from Union Carbide. Unless the FLASH POINT line(s) of SECTION IV shows "none" for a liquid product, the product meets the criteria.

Please add this warning to your file for each of these products. We will send you a modified Material Safety Data Sheet with your next purchase or shipment. Please contact our Director of Product Safety, Dr. W. F. Gorham, (203) 794-2817 if you would like additional information.

Very truly yours,

D. R. Engdahl

D. R. Engdahl
National Sales Manager

1219B
MS-1444

Form Approved
Budget Bureau No. 44-R1387
Approval Expires April 30, 1971

Form No. LSB-OCS-4
M[illegible]

U.S. DEPARTMENT OF LABOR

WAGE AND LABOR STANDARDS ADMINISTRATION
Bureau of Labor Standards

EXHIBIT "B"- 15

MATERIAL SAFETY DATA SHEET

SECTION I

MANUFACTURER'S NAME: A. Gross & Company	EMERGENCY TELEPHONE NO.: (201) 344-3216
ADDRESS (Number, Street, City, State, and ZIP Code): 652 Doremus Ave., Newark, N.J. 07105	
CHEMICAL NAME AND SYNONYMS: Alkyd ~~Grade~~ Soya Fatty Acid	TRADE NAME AND SYNONYMS: GROCO 28
CHEMICAL FAMILY: Fatty Acid	FORMULA

SECTION II HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)
None					

CAS # 6701-08-0

SECTION III PHYSICAL DATA

BOILING POINT (°F.) @ 1mm	340°F	SPECIFIC GRAVITY (H_2O=1)	0.850
VAPOR PRESSURE (mm Hg.)		PERCENT VOLATILE BY VOLUME (%)	0
VAPOR DENSITY (AIR=1)	9.30	EVAPORATION RATE (_____=1)	<1
SOLUBILITY IN WATER	Negligible		
APPEARANCE AND ODOR	Clear, yellow liquid		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used): AOCS Cc9B 55	423°F	FLAMMABLE LIMITS: Unknown	Lel	Uel
EXTINGUISHING MEDIA: CO_2 or Dry Chemical				
SPECIAL FIRE FIGHTING PROCEDURES: None Required				
UNUSUAL FIRE AND EXPLOSION HAZARDS: No Special Handling				

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	Details Unknown
EFFECTS OF OVEREXPOSURE	Details Unknown
EMERGENCY AND FIRST AID PROCEDURES	Eyes - Flush with Water

SECTION VI REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wipe Up

WASTE DISPOSAL METHOD: Normal Procedure for Fats and Oils

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*

VENTILATION	LOCAL EXHAUST		SPECIAL
	MECHANICAL *(General)*	X	OTHER

PROTECTIVE GLOVES	Rubber	EYE PROTECTION	Safety Glasses

OTHER PROTECTIVE EQUIPMENT: NOne

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store in aluminum or stainless tanks or lined drums

OTHER PRECAUTIONS: None

63832

EXHIBIT "B"-16

ROHM AND HAAS COMPANY

CORPORATE PRODUCT INTEGRITY DEPARTMENT
INDEPENDENCE MALL WEST
PHILADELPHIA, PA 19105

EMERGENCY TELEPHONE
215-592-3000 (ROHM AND HAAS)
800-424-9300 (CHEMTREC)

HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
0=INSIGNIFICANT
*=SEE SECTION IV

FIRE 0 | REACTIVITY 0 | TOXICITY 1 | SPECIAL

OSHA
LIST 8

MATERIAL SAFETY DATA SHEET

NOT OSHA HAZARDOUS

MATERIAL	CODE	KEY	DOT HAZARD CLASS
RHOPLEX® B-832 Emulsion	63832	904632-9	NONREGULATED
	DATE ISSUED 08/20/85		

FORMULA	CHEMICAL NAME OR SYNONYMS
Not applicable	Aqueous acrylic emulsion

I - COMPOSITIONAL INFORMATION

	CAS REG. NO.	APPROX WT %	TWA/TLV R&H	OSHA	ACGIH	
Acrylic polymer	NONHAZ	40.0	NE	NE	NE	
Residual monomers (See Section X)	NOT REQ	0.2 Max.	NR	NR	NR	
Ammonia	NOT REQ	0.2 Max.	25	50	25	ppm
Formaldehyde (See Section X)	NOT REQ	0.05	0.5	3	1C	ppm
Water	NONHAZ	60.0	NE	NE	NE	

II - PHYSICAL PROPERTY INFORMATION

APPEARANCE - ODOR - pH.			VISCOSITY
Milky-white liquid; mild ammoniacal odor; pH 9.0-9.6			100 cps. (max.) Brookfield
MELTING OR FREEZING POINT	BOILING POINT	VAPOR PRESSURE (mm Hg)	VAPOR DENSITY (AIR=1)
0C /32F (water)	100C /212F (water)	17 mm Hg @ 20C/68F	>1 (Heavier)
SOLUBILITY IN WATER	PERCENT VOLATILE (BY WEIGHT)	SPECIFIC GRAVITY (WATER=1)	EVAPORATION RATE (BUTYL ACETATE=1)
Dilutable	60 (water)	1-1.2	<1 (Slower)

III - FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT	AUTO IGNITION TEMPERATURE	LOWER EXPLOSION LIMIT (%)	UPPER EXPLOSION LIMIT (%)
Non-combustible	NA	NA	NA

EXTINGUISHING MEDIA

☐ FOAM ☐ "ALCOHOL" FOAM ☐ CO_2 ☐ DRY CHEMICAL ☐ WATER SPRAY ☐ OTHER

SPECIAL FIRE FIGHTING PROCEDURES

NA

UNUSUAL FIRE AND EXPLOSION HAZARDS

Product will not burn but may spatter if temperature exceeds boiling point. Polymer film are capable of burning giving off oxides of carbon/nitrogen.

IV - HEALTH HAZARD INFORMATION

ROHM AND HAAS RECOMMENDED WORK PLACE EXPOSURE LIMITS

TWA--See SECTION I. STEL = 35 ppm ammonia; 1 ppm formaldehyde

EFFECTS OF OVEREXPOSURE

Inhalation: Adverse health effects from vapors or spray mists in poorly ventilated areas may include irritation of the mucous membranes of the nose, throat, respiratory tract and symptoms of headache and nausea.

Skin Contact: Prolonged or repeated contact with product may cause skin irritation.

Eye Contact: Direct contact with product may result in eye irritation.

EMERGENCY AND FIRST AID PROCEDURES

Inhalation: Remove subject to fresh air.

Eye and Skin Contact: Promptly and thoroughly wash eyes with plenty of water for at least 15 minutes and consult physician if irritation persists; wash skin thoroughly with soap and water; if drenched, remove and wash clothing before reuse.

Ingestion: If victim is conscious, give two glasses of water to drink. Call a physician. Do not give anything by mouth to an unconscious person.

FORM SP08 REV 11/83

V – REACTIVITY INFORMATION

STABILITY	CONDITIONS TO AVOID
[X] STABLE [ ] UNSTABLE	NA

HAZARDOUS DECOMPOSITION PRODUCTS

NA

HAZARDOUS POLYMERIZATION	CONDITIONS TO AVOID
[ ] MAY OCCUR [X] WILL NOT OCCUR	NA

INCOMPATIBILITY (MATERIALS TO AVOID)

[ ] WATER [ ] OTHER NA

VI – SPILL OR LEAK PROCEDURE INFORMATION

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Keep unnecessary people away. Dike and contain spill with inert material (sand, earth, etc.) and transfer the liquid to containers for recovery or disposal. Keep spill out of sewers and open bodies of water. Floors may be slippery, care should be exercised to avoid falls.

WASTE DISPOSAL METHODS Coagulate the emulsion with ferric chloride or sulfate and then lime to a clear end-point. Decant the clear liquid to sewer and landfill the coagulum. Incineration of the entire emulsion is possible but impractical because of the high water content. Coagulum may be incinerated.

VII – SPECIAL PROTECTION INFORMATION

VENTILATION TYPE

Mechanical local exhaust at point of contaminant (vapor or mist) release.

RESPIRATORY PROTECTION

None required if good ventilation is maintained. Otherwise wear MSHA/NIOSH approved respirator suitable for vapor or mist concentrations encountered.

PROTECTIVE GLOVES	EYE PROTECTION
Impervious	Safety glasses

OTHER PROTECTIVE EQUIPMENT

VIII – STORAGE AND HANDLING INFORMATION

STORAGE TEMPERATURE	INDOOR	HEATED	REFRIGERATED	OUTDOOR
MAX. 60C/140F MIN. 1.1C/34F	YES	NO	NO	YES

PRECAUTIONARY LABELING: KEEP FROM FREEZING--PRODUCT MAY COAGULATE.

0031-0189

IX – TOXICITY INFORMATION

The effects of overexposure shown in Section IV are based on acute toxicity profiles for a number of acrylic emulsions that are compositionally similar to this product. Typical values are: Rat, oral LD50: >5.0 g/kg; Rabbit, dermal LD50: >5.0 g/kg; Rabbit, skin irritation: practically nonirritating--72-hour Mean Irritation Score = 0 to 2; Rabbit, eye irritation: inconsequentially irritating.

X – MISCELLANEOUS INFORMATION

NOTE: Formaldehyde is an animal carcinogen; however, objective data indicate that under typical conditions of use for this product, the R and H TWA of 0.5 ppm will not be exceeded.
NOTE: Monomer vapors can be evolved when product is heated during processing operations. In such a case, use local exhaust ventilation with a minimum capture velocity of 100 ft/min. (30 m/min.) at the point of monomer evolution. Refer to Industrial Ventilation: A Manual of Recommended Practice published by the Am. Conf. of Govt. Ind. Hygienists.
FOOTNOTE TO SECTION I: NE=not established; NOT REQ or NR=not required.
RHOPLEX® IS A TRADEMARK OF ROHM AND HAAS COMPANY OR ONE OF ITS SUBSIDIARIES OR AFFILIATES.

NA = NOT APPLICABLE C = CEILING VALUE	KEY	DATE OF ISSUE	SUPERSEDES
	904632-9	08/20/85	06/09/82

ROHM AND HAAS COMPANY

CORPORATE PRODUCT INTEGRITY DEPARTMENT
INDEPENDENCE MALL WEST
PHILADELPHIA, PA 19105

EMERGENCY TELEPHONE
215-592-3000 (ROHM AND HAAS)
800-424-9300 (CHEMTREC)

HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
0=INSIGNIFICANT
*=SEE SECTION IV

FIRE 0 | REACTIVITY 0 | TOXICITY 1 | SPECIAL

OSHA
LIST 8

MATERIAL SAFETY DATA SHEET

NOT OSHA HAZARDOUS

MATERIAL	CODE	KEY	DOT HAZARD CLASS
RHOPLEX® B-832 Emulsion	63832	904632-9	NONREGULATED
	DATE ISSUED 08/20/85		

FORMULA	CHEMICAL NAME OR SYNONYMS
Not applicable	Aqueous acrylic emulsion

I – COMPOSITIONAL INFORMATION

	CAS REG. NO.	APPROX WT %	TWA/TLV R&H	OSHA	ACGIH	
Acrylic polymer	NONHAZ	40.0	NE	NE	NE	
Residual monomers (See Section X)	NOT REQ	0.2 Max.	NR	NR	NR	
Ammonia	NOT REQ	0.2 Max.	25	50	25	ppm
Formaldehyde (See Section X)	NOT REQ	0.05	0.5	3	1C	ppm
Water	NONHAZ	60.0	NE	NE	NE	

II – PHYSICAL PROPERTY INFORMATION

APPEARANCE - ODOR - pH.			VISCOSITY
Milky-white liquid; mild ammoniacal odor; pH 9.0-9.6			100 cps. (max.) Brookfield
MELTING OR FREEZING POINT	BOILING POINT	VAPOR PRESSURE (mm Hg)	VAPOR DENSITY (AIR=1)
0C /32F (water)	100C /212F (water)	17 mm Hg @ 20C/68F	>1 (Heavier)
SOLUBILITY IN WATER	PERCENT VOLATILE (BY WEIGHT)	SPECIFIC GRAVITY (WATER=1)	EVAPORATION RATE (BUTYL ACETATE=1)
Dilutable	60 (water)	1-1.2	<1 (Slower)

III – FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT	AUTO IGNITION TEMPERATURE	LOWER EXPLOSION LIMIT (%)	UPPER EXPLOSION LIMIT (%)
Non-combustible	NA	NA	NA

EXTINGUISHING MEDIA

☐ FOAM ☐ "ALCOHOL" FOAM ☐ CO_2 ☐ DRY CHEMICAL ☐ WATER SPRAY ☐ OTHER

SPECIAL FIRE FIGHTING PROCEDURES

NA

UNUSUAL FIRE AND EXPLOSION HAZARDS

Product will not burn but may spatter if temperature exceeds boiling point. Polymer film are capable of burning giving off oxides of carbon/nitrogen.

IV – HEALTH HAZARD INFORMATION

ROHM AND HAAS RECOMMENDED WORK PLACE EXPOSURE LIMITS

TWA--See SECTION I. STEL = 35 ppm ammonia; 1 ppm formaldehyde

EFFECTS OF OVEREXPOSURE

Inhalation: Adverse health effects from vapors or spray mists in poorly ventilated areas may include irritation of the mucous membranes of the nose, throat, respiratory tract and symptom of headache and nausea.

Skin Contact: Prolonged or repeated contact with product may cause skin irritation.

Eye Contact: Direct contact with product may result in eye irritation.

EMERGENCY AND FIRST AID PROCEDURES

Inhalation: Remove subject to fresh air.

Eye and Skin Contact: Promptly and thoroughly wash eyes with plenty of water for at least 15 minutes and consult physician if irritation persists; wash skin thoroughly with soap and water; if drenched, remove and wash clothing before reuse.

Ingestion: If victim is conscious, give two glasses of water to drink. Call a physician. Do not give anything by mouth to an unconscious person.

V – REACTIVITY INFORMATION

STABILITY	CONDITIONS TO AVOID
[X] STABLE [ ] UNSTABLE	NA

HAZARDOUS DECOMPOSITION PRODUCTS
NA

HAZARDOUS POLYMERIZATION	CONDITIONS TO AVOID
[ ] MAY OCCUR [X] WILL NOT OCCUR	NA

INCOMPATIBILITY (MATERIALS TO AVOID)
[ ] WATER [ ] OTHER NA

VI – SPILL OR LEAK PROCEDURE INFORMATION

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Keep unnecessary people away. Dike and contain spill with inert material (sand, earth, etc.) and transfer the liquid to containers for recovery or disposal. Keep spill out of sewers and open bodies of water. Floors may be slippery, care should be exercised to avoid falls.

WASTE DISPOSAL METHODS Coagulate the emulsion with ferric chloride or sulfate and then lime to a clear end-point. Decant the clear liquid to sewer and landfill the coagulum. Incineration of the entire emulsion is possible but impractical because of the high water content. Coagulum may be incinerated.

VII – SPECIAL PROTECTION INFORMATION

VENTILATION TYPE
Mechanical local exhaust at point of contaminant (vapor or mist) release.

RESPIRATORY PROTECTION
None required if good ventilation is maintained. Otherwise wear MSHA/NIOSH approved respirator suitable for vapor or mist concentrations encountered.

PROTECTIVE GLOVES	EYE PROTECTION
Impervious	Safety glasses

OTHER PROTECTIVE EQUIPMENT

VIII – STORAGE AND HANDLING INFORMATION

STORAGE TEMPERATURE	INDOOR	HEATED	REFRIGERATED	OUTDOOR
MAX. 60C/140F MIN. 1.1C/34F	YES	NO	NO	YES

PRECAUTIONARY LABELING: KEEP FROM FREEZING--PRODUCT MAY COAGULATE.

0031-0191

IX – TOXICITY INFORMATION

The effects of overexposure shown in Section IV are based on acute toxicity profiles for a number of acrylic emulsions that are compositionally similar to this product. Typical values are: Rat, oral LD50: >5.0 g/kg; Rabbit, dermal LD50: >5.0 g/kg; Rabbit, skin irritation: practically nonirritating--72-hour Mean Irritation Score = 0 to 2; Rabbit, eye irritation: inconsequentially irritating.

X – MISCELLANEOUS INFORMATION

NOTE: Formaldehyde is an animal carcinogen; however, objective data indicate that under typical conditions of use for this product, the R and H TWA of 0.5 ppm will not be exceeded.
NOTE: Monomer vapors can be evolved when product is heated during processing operations. In such a case, use local exhaust ventilation with a minimum capture velocity of 100 ft/min. (30 m/min.) at the point of monomer evolution. Refer to Industrial Ventilation: A Manual of Recommended Practice published by the Am. Conf. of Govt. Ind. Hygienists.
FOOTNOTE TO SECTION I: NE=not established; NOT REQ or NR=not required.
RHOPLEX® IS A TRADEMARK OF ROHM AND HAAS COMPANY OR ONE OF ITS SUBSIDIARIES OR AFFILIATES.

NA = NOT APPLICABLE C = CEILING VALUE	KEY	DATE OF ISSUE	SUPERSEDES
	904632-9	08/20/85	06/09/82

ROHM AND HAAS COMPANY

CORPORATE PRODUCT INTEGRITY DEPARTMENT
INDEPENDENCE MALL WEST
PHILADELPHIA, PA 19105

EMERGENCY TELEPHONE
215-592-3000 (ROHM AND HAAS)
800-424-9300 (CHEMTREC)

HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
0=INSIGNIFICANT
*=SEE SECTION IV

FIRE 0 | REACTIVITY 0 | TOXICITY 1 | SPECIAL

OSHA
LIST 8

MATERIAL SAFETY DATA SHEET

NOT OSHA HAZARDOUS

MATERIAL	CODE	KEY	DOT HAZARD CLASS
RHOPLEX® B-832 Emulsion	63832	904632-9	NONREGULATED
	DATE ISSUED 08/20/85		

FORMULA	CHEMICAL NAME OR SYNONYMS
Not applicable	Aqueous acrylic emulsion

I – COMPOSITIONAL INFORMATION

	CAS REG. NO.	APPROX WT %	TWA/TLV R&H	OSHA	ACGIH	
Acrylic polymer	NONHAZ	40.0	NE	NE	NE	
Residual monomers (See Section X)	NOT REQ	0.2 Max.	NR	NR	NR	
Ammonia	NOT REQ	0.2 Max.	25	50	25	ppm
Formaldehyde (See Section X)	NOT REQ	0.05	0.5	3	1C	ppm
Water	NONHAZ	60.0	NE	NE	NE	

II – PHYSICAL PROPERTY INFORMATION

APPEARANCE - ODOR - pH.			VISCOSITY
Milky-white liquid; mild ammoniacal odor; pH 9.0-9.6			100 cps. (max.) Brookfield
MELTING OR FREEZING POINT	BOILING POINT	VAPOR PRESSURE (mm Hg)	VAPOR DENSITY (AIR=1)
0C /32F (water)	100C /212F (water)	17 mm Hg @ 20C/68F	>1 (Heavier)
SOLUBILITY IN WATER	PERCENT VOLATILE (BY WEIGHT)	SPECIFIC GRAVITY (WATER=1)	EVAPORATION RATE (BUTYL ACETATE=1)
Dilutable	60 (water)	1-1.2	<1 (Slower)

III – FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT	AUTO IGNITION TEMPERATURE	LOWER EXPLOSION LIMIT (%)	UPPER EXPLOSION LIMIT (%)
Non-combustible	NA	NA	NA

EXTINGUISHING MEDIA

☐ FOAM ☐ "ALCOHOL" FOAM ☐ CO_2 ☐ DRY CHEMICAL ☐ WATER SPRAY ☐ OTHER

SPECIAL FIRE FIGHTING PROCEDURES

NA

UNUSUAL FIRE AND EXPLOSION HAZARDS

Product will not burn but may spatter if temperature exceeds boiling point. Polymer film are capable of burning giving off oxides of carbon/nitrogen.

IV – HEALTH HAZARD INFORMATION

ROHM AND HAAS RECOMMENDED WORK PLACE EXPOSURE LIMITS

TWA--See SECTION I. STEL = 35 ppm ammonia; 1 ppm formaldehyde

EFFECTS OF OVEREXPOSURE

Inhalation: Adverse health effects from vapors or spray mists in poorly ventilated areas may include irritation of the mucous membranes of the nose, throat, respiratory tract and symptom of headache and nausea.

Skin Contact: Prolonged or repeated contact with product may cause skin irritation.

Eye Contact: Direct contact with product may result in eye irritation.

EMERGENCY AND FIRST AID PROCEDURES

Inhalation: Remove subject to fresh air.

Eye and Skin Contact: Promptly and thoroughly wash eyes with plenty of water for at least 15 minutes and consult physician if irritation persists; wash skin thoroughly with soap and water; if drenched, remove and wash clothing before reuse.

Ingestion: If victim is conscious, give two glasses of water to drink. Call a physician. D not give anything by mouth to an unconscious person.

FORM SPDB REV 11/83

V – REACTIVITY INFORMATION

STABILITY	CONDITIONS TO AVOID
[X] STABLE [ ] UNSTABLE	NA

HAZARDOUS DECOMPOSITION PRODUCTS
NA

HAZARDOUS POLYMERIZATION	CONDITIONS TO AVOID
[ ] MAY OCCUR [X] WILL NOT OCCUR	NA

INCOMPATIBILITY (MATERIALS TO AVOID)
[ ] WATER [ ] OTHER NA

VI – SPILL OR LEAK PROCEDURE INFORMATION

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Keep unnecessary people away. Dike and contain spill with inert material (sand, earth, etc.) and transfer the liquid to containers for recovery or disposal. Keep spill out of sewers and open bodies of water. Floors may be slippery, care should be exercised to avoid falls.

WASTE DISPOSAL METHODS Coagulate the emulsion with ferric chloride or sulfate and then lime to a clear end-point. Decant the clear liquid to sewer and landfill the coagulum. Incineration of the entire emulsion is possible but impractical because of the high water content. Coagulum may be incinerated.

VII – SPECIAL PROTECTION INFORMATION

VENTILATION TYPE
Mechanical local exhaust at point of contaminant (vapor or mist) release.

RESPIRATORY PROTECTION
None required if good ventilation is maintained. Otherwise wear MSHA/NIOSH approved respirator suitable for vapor or mist concentrations encountered.

PROTECTIVE GLOVES	EYE PROTECTION
Impervious	Safety glasses

OTHER PROTECTIVE EQUIPMENT

VIII – STORAGE AND HANDLING INFORMATION

STORAGE TEMPERATURE	INDOOR	HEATED	REFRIGERATED	OUTDOOR
MAX. 60C/140F MIN. 1.1C/34F	YES	NO	NO	YES

PRECAUTIONARY LABELING: KEEP FROM FREEZING--PRODUCT MAY COAGULATE.

0031-0193

IX – TOXICITY INFORMATION

The effects of overexposure shown in Section IV are based on acute toxicity profiles for a number of acrylic emulsions that are compositionally similar to this product. Typical values are: Rat, oral LD50: >5.0 g/kg; Rabbit, dermal LD50: >5.0 g/kg; Rabbit, skin irritation: practically nonirritating--72-hour Mean Irritation Score = 0 to 2; Rabbit, eye irritation: inconsequentially irritating.

X – MISCELLANEOUS INFORMATION

NOTE: Formaldehyde is an animal carcinogen; however, objective data indicate that under typical conditions of use for this product, the R and H TWA of 0.5 ppm will not be exceeded.
NOTE: Monomer vapors can be evolved when product is heated during processing operations. In such a case, use local exhaust ventilation with a minimum capture velocity of 100 ft/min. (30 m/min.) at the point of monomer evolution. Refer to Industrial Ventilation: A Manual of Recommended Practice published by the Am. Conf. of Govt. Ind. Hygienists.
FOOTNOTE TO SECTION I: NE=not established; NOT REQ or NR=not required.
RHOPLEX® IS A TRADEMARK OF ROHM AND HAAS COMPANY OR ONE OF ITS SUBSIDIARIES OR AFFILIATES.

NA = NOT APPLICABLE C = CEILING VALUE	KEY	DATE OF ISSUE	SUPERSEDES
	904632-9	08/20/85	06/09/82

ROHM AND HAAS COMPANY

CORPORATE PRODUCT INTEGRITY DEPARTMENT
INDEPENDENCE MALL WEST
PHILADELPHIA, PA 19105

EMERGENCY TELEPHONE
215-592-3000 (ROHM AND HAAS)
800-424-9300 (CHEMTREC)

HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
0=INSIGNIFICANT
*=SEE SECTION IV

FIRE 0 | REACTIVITY 0 | TOXICITY 1 | SPECIAL

OSHA
LIST 8

MATERIAL SAFETY DATA SHEET

NOT OSHA HAZARDOUS

MATERIAL	CODE	KEY	DOT HAZARD CLASS
RHOPLEX® B-832 Emulsion	63832	904632-9	NONREGULATED
	DATE ISSUED 08/20/85		

FORMULA	CHEMICAL NAME OR SYNONYMS
Not applicable	Aqueous acrylic emulsion

I – COMPOSITIONAL INFORMATION

	CAS REG. NO.	APPROX WT %	TWA/TLV R&H	OSHA	ACGIH	
Acrylic polymer	NONHAZ	40.0	NE	NE	NE	
Residual monomers (See Section X)	NOT REQ	0.2 Max.	NR	NR	NR	
Ammonia	NOT REQ	0.2 Max.	25	50	25	ppm
Formaldehyde (See Section X)	NOT REQ	0.05	0.5	3	1C	ppm
Water	NONHAZ	60.0	NE	NE	NE	

II – PHYSICAL PROPERTY INFORMATION

APPEARANCE - ODOR - pH.			VISCOSITY
Milky-white liquid; mild ammoniacal odor; pH 9.0-9.6			100 cps. (max.) Brookfield
MELTING OR FREEZING POINT	BOILING POINT	VAPOR PRESSURE (mm Hg)	VAPOR DENSITY (AIR=1)
0C /32F (water)	100C /212F (water)	17 mm Hg @ 20C/68F	>1 (Heavier)
SOLUBILITY IN WATER	PERCENT VOLATILE (BY WEIGHT)	SPECIFIC GRAVITY (WATER=1)	EVAPORATION RATE (BUTYL ACETATE=1)
Dilutable	60 (water)	1-1.2	<1 (Slower)

III – FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT	AUTO IGNITION TEMPERATURE	LOWER EXPLOSION LIMIT (%)	UPPER EXPLOSION LIMIT (%)
Non-combustible	NA	NA	NA

EXTINGUISHING MEDIA

☐ FOAM ☐ "ALCOHOL" FOAM ☐ CO_2 ☐ DRY CHEMICAL ☐ WATER SPRAY ☐ OTHER

SPECIAL FIRE FIGHTING PROCEDURES

NA

UNUSUAL FIRE AND EXPLOSION HAZARDS

Product will not burn but may spatter if temperature exceeds boiling point. Polymer film are capable of burning giving off oxides of carbon/nitrogen.

IV – HEALTH HAZARD INFORMATION

ROHM AND HAAS RECOMMENDED WORK PLACE EXPOSURE LIMITS

TWA--See SECTION I. STEL = 35 ppm ammonia; 1 ppm formaldehyde

EFFECTS OF OVEREXPOSURE

Inhalation: Adverse health effects from vapors or spray mists in poorly ventilated areas may include irritation of the mucous membranes of the nose, throat, respiratory tract and symptom of headache and nausea.

Skin Contact: Prolonged or repeated contact with product may cause skin irritation.

Eye Contact: Direct contact with product may result in eye irritation.

EMERGENCY AND FIRST AID PROCEDURES

Inhalation: Remove subject to fresh air.

Eye and Skin Contact: Promptly and thoroughly wash eyes with plenty of water for at least 15 minutes and consult physician if irritation persists; wash skin thoroughly with soap and water; if drenched, remove and wash clothing before reuse.

Ingestion: If victim is conscious, give two glasses of water to drink. Call a physician. D not give anything by mouth to an unconscious person.

FORM SPDS REV 11/83

V – REACTIVITY INFORMATION

STABILITY	CONDITIONS TO AVOID
[X] STABLE [ ] UNSTABLE	NA

HAZARDOUS DECOMPOSITION PRODUCTS
NA

HAZARDOUS POLYMERIZATION	CONDITIONS TO AVOID
[ ] MAY OCCUR [X] WILL NOT OCCUR	NA

INCOMPATIBILITY (MATERIALS TO AVOID)
[ ] WATER [ ] OTHER NA

VI – SPILL OR LEAK PROCEDURE INFORMATION

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Keep unnecessary people away. Dike and contain spill with inert material (sand, earth, etc.) and transfer the liquid to containers for recovery or disposal. Keep spill out of sewers and open bodies of water. Floors may be slippery, care should be exercised to avoid falls.

WASTE DISPOSAL METHODS Coagulate the emulsion with ferric chloride or sulfate and then lime to a clear end-point. Decant the clear liquid to sewer and landfill the coagulum. Incineration of the entire emulsion is possible but impractical because of the high water content. Coagulum may be incinerated.

VII – SPECIAL PROTECTION INFORMATION

VENTILATION TYPE
Mechanical local exhaust at point of contaminant (vapor or mist) release.

RESPIRATORY PROTECTION
None required if good ventilation is maintained. Otherwise wear MSHA/NIOSH approved respirator suitable for vapor or mist concentrations encountered.

PROTECTIVE GLOVES	EYE PROTECTION
Impervious	Safety glasses

OTHER PROTECTIVE EQUIPMENT

VIII – STORAGE AND HANDLING INFORMATION

STORAGE TEMPERATURE	INDOOR	HEATED	REFRIGERATED	OUTDOOR
MAX. 60C/140F MIN. 1.1C/34F	YES	NO	NO	YES

PRECAUTIONARY LABELING: KEEP FROM FREEZING--PRODUCT MAY COAGULATE.

0031-0195

IX – TOXICITY INFORMATION

The effects of overexposure shown in Section IV are based on acute toxicity profiles for a number of acrylic emulsions that are compositionally similar to this product. Typical values are: Rat, oral LD50: >5.0 g/kg; Rabbit, dermal LD50: >5.0 g/kg; Rabbit, skin irritation: practically nonirritating--72-hour Mean Irritation Score = 0 to 2; Rabbit, eye irritation: inconsequentially irritating.

X – MISCELLANEOUS INFORMATION

NOTE: Formaldehyde is an animal carcinogen; however, objective data indicate that under typical conditions of use for this product, the R and H TWA of 0.5 ppm will not be exceeded.
NOTE: Monomer vapors can be evolved when product is heated during processing operations. In such a case, use local exhaust ventilation with a minimum capture velocity of 100 ft/min. (30 m/min.) at the point of monomer evolution. Refer to Industrial Ventilation: A Manual of Recommended Practice published by the Am. Conf. of Govt. Ind. Hygienists.
FOOTNOTE TO SECTION I: NE=not established; NOT REQ or NR=not required.
RHOPLEX® IS A TRADEMARK OF ROHM AND HAAS COMPANY OR ONE OF ITS SUBSIDIARIES OR AFFILIATES.

NA = NOT APPLICABLE C = CEILING VALUE	KEY	DATE OF ISSUE	SUPERSEDES
	904632-9	08/20/85	06/09/82

EXHIBIT "B"-17

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

RECEIVED FEB 4 1985 MAILROOM

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
CHEMICAL CORPORATION OF AMERICA	(201) 438-5800
ADDRESS (Number, Street, City, State, and ZIP Code) 2 Carlton Ave., East Rutherford, N. J. 07073	
CHEMICAL NAME AND SYNONYMS POLYPROPYLENE/ORGANIC ACID COPOLYMER EMULSION	TRADE NAME AND SYNONYMS POLY EMULSION 43 N40
CHEMICAL FAMILY Nonionic propylene/maleic anhydride copolymer emulsion	FORMULA emulsion

SECTION II · HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS		N/A	BASE METAL		N/A
CATALYST		N/A	ALLOYS		N/A
VEHICLE		N/A	METALLIC COATINGS		N/A
SOLVENTS		N/A	FILLER METAL PLUS COATING OR CORE FLUX		N/A
ADDITIVES		N/A	OTHERS		N/A
OTHERS		N/A			N/A

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
None		

SECTION III · PHYSICAL DATA

BOILING POINT (°F.)	212°C	SPECIFIC GRAVITY (H_2O=1)	1
VAPOR PRESSURE (mm Hg.)	17.5	PERCENT, VOLATILE BY VOLUME (%)	60%
VAPOR DENSITY (AIR=1)	1	EVAPORATION RATE (water =1)	1
SOLUBILITY IN WATER	Disp.		
APPEARANCE AND ODOR	Grey, translucent liquid. Characteristic odor.		

SECTION IV · FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	None	FLAMMABLE LIMITS N/A	Lel	Uel
EXTINGUISHING MEDIA	N/A			
SPECIAL FIRE FIGHTING PROCEDURES	None			
UNUSUAL FIRE AND EXPLOSION HAZARDS	None			

(Continued on reverse side)

0031-0196

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
Unknown

EFFECTS OF OVEREXPOSURE
Possible nausea if ingested in large quantities. Irritating to eyes. Possible skin irritant.

EMERGENCY AND FIRST AID PROCEDURES
If splashed on skin, wash with soap and water. If splashed in eyes, wash with copious amounts of water followed by 1% boric acid solution and consult a physican. If ingested, induce vomiting.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Adsorb and dispose of as solid organic waste.

WASTE DISPOSAL METHOD
(see above)

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*
None required.

VENTILATION	LOCAL EXHAUST No special ventilation required.	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES Recommended	EYE PROTECTION Goggles required.

OTHER PROTECTIVE EQUIPMENT
None

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Keep From Freezing

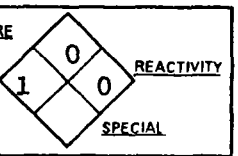
OTHER PRECAUTIONS
None

ROHM AND HAAS COMPANY EXHIBIT "B"-18

CORPORATE PRODUCT INTEGRITY DEPARTMENT
INDEPENDENCE MALL WEST
PHILADELPHIA, PA 19105

EMERGENCY TELEPHONE
215-592-3000 (ROHM AND HAAS)
800-424-9300 (CHEMTREC)

HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
0=INSIGNIFICANT
*=SEE SECTION IV



PEL
LIST 8

MATERIAL SAFETY DATA SHEET

NOT OSHA HAZARDOUS
NOT WHMIS CONTROLLED

MATERIAL	CODE	KEY	DOT HAZARD CLASS
DURAPLUS™ 1 Emulsion	68429	893054-3	NONREGULATED
	DATE ISSUED 05/25/89		

FORMULA	CHEMICAL NAME OR SYNONYMS
Not Applicable	Aqueous acrylic emulsion

I – COMPOSITIONAL INFORMATION

	CAS REG. NO.	APPROX WT %	TWA/TLV R&H	OSHA	ACGIH	
Acrylic copolymer	NONHAZ	37-39	NE	NE	NE	
Residual monomers (See Section X)	NOT REQ	0.1 Max.	NR	NR	NR	
Ammonia	7664-41-7	0.2 Max.	25	NE	25	ppm
Water	NONHAZ	61-63	NE	NE	NE	

II – PHYSICAL PROPERTY INFORMATION

APPEARANCE - ODOR - pH.			VISCOSITY
Milky white liquid; slight ammoniacal odor; pH 8.5-9.5			100 cps max.
MELTING OR FREEZING POINT	BOILING POINT	VAPOR PRESSURE (mm Hg)	VAPOR DENSITY (AIR=1)
0C/32F water	100C/212F water	17 20C/68F	Less than 1, water
SOLUBILITY IN WATER	PERCENT VOLATILE (BY WEIGHT)	SPECIFIC GRAVITY (WATER=1)	EVAPORATION RATE (BUTYL ACETATE=1)
Dilutable	61-63 water	1.0-1.2	Less than 1, water

III – FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT	AUTO IGNITION TEMPERATURE	LOWER EXPLOSION LIMIT (%)	UPPER EXPLOSION LIMIT (%)
Non-combustible	NA	NA	NA

EXTINGUISHING MEDIA

☐ FOAM ☐ "ALCOHOL" FOAM ☐ CO_2 ☐ DRY CHEMICAL ☐ WATER SPRAY ☐ OTHER

SPECIAL FIRE FIGHTING PROCEDURES

None

UNUSUAL FIRE AND EXPLOSION HAZARDS

Material can splatter above 100C/212F. Polymer film can burn.

IV – HEALTH HAZARD INFORMATION

ROHM AND HAAS RECOMMENDED WORK PLACE EXPOSURE LIMITS

TWA--See SECTION I. STEL = 35 ppm ammonia

EFFECTS OF OVEREXPOSURE

Inhalation: Vapor or mist can cause headache, nausea, and irritation of the nose, throat and lungs.

Skin Contact: Irritating to skin upon repeated or prolonged contact.

Eye Contact: Slightly irritating to eyes.

EMERGENCY AND FIRST AID PROCEDURES

Inhalation: Move subject to fresh air.

Eye and Skin Contact: Flush eyes with a large amount of water for at least 15 minutes. See a physician if irritation persists. Wash affected skin areas with soap and water.

FORM SP98 REV. 11/83

V – REACTIVITY INFORMATION

STABILITY	CONDITIONS TO AVOID
[X] STABLE [ ] UNSTABLE	Temperatures over 177C/350F.
HAZARDOUS DECOMPOSITION PRODUCTS: NA	
HAZARDOUS POLYMERIZATION: [ ] MAY OCCUR [X] WILL NOT OCCUR	CONDITIONS TO AVOID: NA
INCOMPATIBILITY (MATERIALS TO AVOID): [ ] WATER [ ] OTHER	NA

VI – SPILL OR LEAK PROCEDURE INFORMATION

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Keep spectators away. Floor may be slippery; use care to avoid falling. Dike and contain spill with inert material (e.g., sand, earth). Transfer liquid to containers for recovery or disposal and solid diking material to separate containers for disposal. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.

WASTE DISPOSAL METHODS

Coagulate the emulsion by the stepwise addition of ferric chloride and lime. Remove the clear supernatant liquid and flush to a chemical sewer. Landfill and incinerate the solids and the contaminated diking material according to local, state, and federal regulations.

VII – SPECIAL PROTECTION INFORMATION

VENTILATION TYPE

Mechanical local exhaust ventilation at point of contaminant release.

RESPIRATORY PROTECTION

None required if good ventilation is maintained. Wear respirator (MSHA/NIOSH-approved or equivalent) suitable for concentrations and types of air contaminants encountered.

PROTECTIVE GLOVES	EYE PROTECTION
Impervious	Chemical splash goggles (ANSI Z-87.1 or approved equivalent)

OTHER PROTECTIVE EQUIPMENT

VIII – STORAGE AND HANDLING INFORMATION

STORAGE TEMPERATURE	INDOOR	HEATED	REFRIGERATED	OUTDOOR
MAX. 60C/140F MIN. 1C/34F				

PRECAUTIONARY LABELING: KEEP FROM FREEZING--PRODUCT MAY COAGULATE.

0031-0199

IX – TOXICITY INFORMATION

The effects of overexposure shown in Section IV are based on acute toxicity profiles for a number of acrylic emulsions that are compositionally similar to this product. Typical values are: Rat, oral LD50: >5.0 g/kg; Rabbit, dermal LD50: >5.0 g/kg; Rabbit, skin irritation: practically nonirritating--72-hour Mean Irritation Score = 0 to 2; Rabbit, eye irritation: inconsequentially irritating.

X – MISCELLANEOUS INFORMATION

NOTE: Monomer vapors can be evolved when product is heated during processing operations. In such a case, use local exhaust ventilation with a minimum capture velocity of 100 ft/min. (30 m/min.) at the point of monomer evolution. Refer to Industrial Ventilation: A Manual of Recommended Practice published by the Am. Conf. of Govt. Ind. Hygienists.

FOOTNOTE TO SECTION I: NE=not established; NOT REQ or NR=not required.

NA = NOT APPLICABLE C = CEILING VALUE	KEY	DATE OF ISSUE	SUPERSEDES
	893054-3	05/25/89	04/17/86

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

EXHIBIT "B"- 19

MATERIAL SAFETY DATA SHEET

C/R Ludok

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
NYACOL INC	617 881 2220
ADDRESS (Number, Street, City, State, and ZIP Code) MEGUNCO RD ASHLAND MASS	
CHEMICAL NAME AND SYNONYMS colloidal silica	TRADE NAME AND SYNONYMS NYACOL 1440
CHEMICAL FAMILY silica in water	FORMULA SiO_2, H_2O

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	212	SPECIFIC GRAVITY (H_2O=1)	1.3
VAPOR PRESSURE (mm Hg.)	water	PERCENT, VOLATILE BY VOLUME (%)	75
VAPOR DENSITY (AIR=1)	water	EVAPORATION RATE (_____=1)	water
SOLUBILITY IN WATER	total		
APPEARANCE AND ODOR	slightly cloudy, no odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
none			
EXTINGUISHING MEDIA			
SPECIAL FIRE FIGHTING PROCEDURES			
UNUSUAL FIRE AND EXPLOSION HAZARDS none			

(Continued on reverse side)

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: none

EFFECTS OF OVEREXPOSURE: slightly caustic solution, eye irritant pH = 10

EMERGENCY AND FIRST AID PROCEDURES: wash well

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*: freezing, acids, caustic salts

HAZARDOUS DECOMPOSITION PRODUCTS: None

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	freezing

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: wash well

WASTE DISPOSAL METHOD: flush well with water

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*: if sprayed, silica dust can result

VENTILATION	LOCAL EXHAUST	SPECIAL
if sprayed	MECHANICAL *(General)* if sprayed	OTHER
PROTECTIVE GLOVES	rubber dry skin use	EYE PROTECTION yes

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: do not freeze

OTHER PRECAUTIONS

MATERIAL SAFETY DATA SHEET

EXHIBIT "B"- 20

TETRASODIUM EDTA, SOLUTION, 50%
AKA HAMPENE 100

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

STANCHEM Inc.
43 Jutland Road.
Etobicoke, Ontario
M8Z 2G6
(416) 259-8231

WHMIS Number: 00061252
Index: HCI0095/97A
Effective Date: 1997 January 24
Date of Revision: 1997 February 04

EMERGENCY TELEPHONE NUMBERS

Toronto, Ont.	(416) 226-6117	Montreal, Que	(514) 861-1211
Winnipeg, Man.	(204) 943-8827	Edmonton, Alta.	(403) 424-1754
Vancouver, B.C.	(604) 685-5036		

PRODUCT IDENTIFICATION

Product Name: Tetrasodium EDTA, Solution, 50%.
Chemical Name: Tetrasodium EDTA Aqueous Solution.
Synonyms: Questal Special 0860; Tetrasodium ethylenediamine tetraacetate Aqueous Solution.
Chemical Family: Organic Sodium Salt.
Molecular Formula: C10H12N2O8.4Na.
Product Use: Chelating Agent. Complexing Agent.
CAS #: See Section 3, "Composition, Information on Ingredients".
WHMIS Classification: E: Corrosive.
Risk Phrases: Corrosive.

READ THE ENTIRE MSDS FOR THE COMPLETE HAZARD EVALUATION OF THIS PRODUCT.

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Corrosive! Causes severe skin and eyes burns. Vapors are extremely irritating to eyes and respiratory tract. Can decompose at high temperatures forming toxic gases. Contents may develop pressure on prolonged exposure to heat.

POTENTIAL HEALTH EFFECTS

. Inhalation: Corrosive! Product may cause severe irritation of the nose, throat and respiratory tract. Repeated and/or prolonged exposures may cause productive cough, running nose, bronchopneumonia, pulmonary edema (fluid build-up in lungs), and reduction of pulmonary function.

. Skin Contact: Corrosive! Concentrated solutions may cause pain and deep and severe burns to the skin. Prolonged and repeated exposure to dilute solutions often causes irritation, redness, pain and drying and cracking of the skin.

. Skin Absorption: May be absorbed through intact skin. See "Other Health Effects" Section.

. Eye Contact: Extremely corrosive! This product causes corneal scarring and clouding. Glaucoma, cataracts and permanent blindness may occur.

. Ingestion: Corrosive! This product causes severe burning and pain in the mouth, throat and abdomen. Vomiting, diarrhea and perforation of the esophagus and stomach lining may occur.

Other Health Effects: Corrosive effects on the skin and eyes may be delayed, and damage may occur without the sensation or onset of pain. Strict adherence to first aid measures following any exposure is essential.

3. COMPOSITION, INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS OF MATERIAL

Hazardous Ingredients	CAS No.	ACGIH TLV	%
Sodium Hydroxide	001310-73-2	2 mg/M3 (Ceiling)	1 - 5
Trisodium Nitrilo-triacetate	005064-31-3	Not Listed.	0.1 - 1

NON-HAZARDOUS INGREDIENTS OF MATERIALS

Non-Hazardous Ingredients	CAS No.	ACGIH TLV	%
Tetrasodium EDTA	000064-02-8	Not Listed.	30 - 60
Water	007732-18-5	Not Listed.	Balance.

4. FIRST AID MEASURES

FIRST AID PROCEDURES

. Inhalation: Move victim to fresh air. Give artificial respiration ONLY if breathing has stopped. Give cardiopulmonary resuscitation (CPR) if there is no breathing AND no pulse. Oxygen administration may be beneficial in this situation but should only be administered by personnel trained in its use. Obtain medical attention IMMEDIATELY.

. Skin Contact: Flush skin with running water for a minimum of 30 minutes or up to 60 minutes for critical body areas. If irritation persists, repeat flushing. Obtain medical attention IMMEDIATELY. Do not transport victim unless the recommended flushing period is completed or flushing can be continued during transport.

While the patient is being transported to a medical facility, apply compresses of iced water. If medical treatment must be delayed, immerse the affected area in iced water. If immersion is not practical, compresses of iced water can be applied. Avoid freezing tissues.

. Eye Contact: Immediately flush eyes with running water for a minimum of 30 minutes, preferably up to 60 minutes. Hold eyelids open during flushing. If irritation persists, repeat flushing. Do not transport victim until the recommended flushing period is completed unless flushing can be continued during transport.

. Ingestion: Do not attempt to give anything by mouth to an unconscious person. If victim is alert and not convulsing, rinse mouth out and give 1/2 to 1 glass of water to dilute material. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. IMMEDIATELY contact local poison control centre. Vomiting may need to be induced but only under the direction of a physician or a poison control centre. IMMEDIATELY transport victim to an emergency facility.

Note to Physicians: Due to the severly irritating or corrosive nature of the material, swallowing may lead to ulceration and inflammation of the upper alimentary tract with hemorage and fluid loss. Also, perforation of the esophagus or stomach may occur, leading to mediastinitis or peritonitis and the resultant complications. (3)

Mucosal injury following ingestion of this corrosive material may contraindicate the induction of vomiting in the treatment of possible intoxication. Similarly, if gastric lavage is performed, intubation should be done with great care. If oral burns are present or a corrosive ingestion is suspected by the patient's history, perform esophagoscopy as soon as possible. Scope should not be passed beyond the first burn because of the risk of perforation.

This product contains materials that may cause severe pneumonitis if aspirated. If ingestion has occurred less than 2 hours earlier, carry out careful gastric lavage; use endotracheal cuff if available, to prevent aspiration. Observe patient for respiratory difficulty from aspiration pneumonitis. Give artificial resuscitation and appropriate chemotherapy if respiration is depressed.

Medical conditions that may be aggravated by exposure to this product include diseases of the skin, eyes or respiratory tract.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

Flammability Class (WHMIS): Not regulated.

Flash Point (TCC, Deg. Celsius): Not applicable.
Autoignition Temperature (Deg. Celsius): Not applicable.
Flammability Limits in Air (%): LEL: Not applicable.
UEL: Not applicable.

Hazardous Combustion Products: Thermal decomposition products are toxic and may include ammonia, aldehydes, ketones, oxides of carbon, nitrogen and sodium.

Unusual Fire or Explosion Hazards: Closed containers exposed to heat may explode. Spilled material may cause floors and contact surfaces to become slippery.

Sensitivity to Mechanical Impact: Not available. Not expected to be sensitive to mechanical impact.
Rate of Burning: Not available.
Explosive Power: Not available.
Sensitivity to Static Discharge: Not available. Not expected to be sensitive to static discharge.

EXTINGUISHING MEDIA

Fire Extinguishing Media: For large fires use an all purpose type AFFF foam according to foam manufacturer's recommended techniques. The foam supplier should be consulted for recommendations regarding foam types and delivery rates for specific applications. Use carbon dioxide or dry chemical media for small fires. If only water is available, use it in the form of a fog. This material may produce a floating fire hazard in extreme fire conditions. Dry chemical, foam, carbon dioxide or Halon 1211.

FIRE FIGHTING INSTRUCTIONS

Instructions to the Fire Fighters: Use water spray to cool fire-exposed containers or structures. Use water spray to disperse vapours. Spilled material may cause floors and contact surfaces to become slippery.

Fire Fighting Protective Equipment: Use self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Information in this section is for responding to spills, leaks or releases in order to prevent or minimize the adverse effects on persons, property and the environment. There may be specific reporting requirements associated with spills, leaks or releases, which change from region to region. The responsibility of reporting lies directly with the handlers of the substance.

Containment and Clean-Up Procedures: Wear protective clothing. Spilled material may cause floors and contact surfaces to become slippery. Collect product for recovery or disposal. For release to land, or storm water runoff, contain discharge by constructing dykes or applying inert absorbent; for release to water, utilize damming and/or water diversion to minimize the spread of contamination. Ventilate enclosed spaces. Notify applicable government authority if release is reportable or could adversely affect the environment.

7. HANDLING AND STORAGE

HANDLING

Handling Practices: Use normal "good" industrial hygiene and housekeeping practices. Aluminum and its alloys should not be used in equipment for storage, handling or transportation.

Ventilation Requirements: Do not use in poorly ventilated or confined areas without proper respiratory protection. Ventilation should be corrosion proof.

Other Precautions: Use only with adequate ventilation and avoid breathing aerosols (vapours or mists). Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Wash contaminated clothing thoroughly before re-use.

Corrosive fogs are most likely to occur at the exhaust pipes of manufacturing or storage tanks, especially during the tank filling process. Compressed air should be used with care to unload acids, bases and other corrosive products from delivery trucks. It is highly recommended that the product be cleaned from the exhaust pipe. Knowledge of laws and regulations which set out the measures to be followed is required.

Absorption via contact with skin, eyes and mucous membranes can contribute to the overall exposure. Consider measures to prevent absorption by these routes.

STORAGE

Storage Temperature (Deg Celsius): See below.

Ventilation Requirements: Ventilation should be corrosion proof.

Storage Requirements: Store in a clean, cool well ventilated area, away from organic chemicals, strong bases, metal powders, carbides, sulfides, and any readily oxidizable material. Protect from direct sunlight. Protect against physical damage. Storage tanks should be in a contained area to control any spills or leaks. Storage area should be equipped with corrosion-resistant floors, sumps and should have controlled drainage to a recovery tank.

Corrosive mist is most likely to be generated at the vents of process or storage tanks, especially during filling operations. The use of compressed air to force corrosive materials from delivery trucks is of special concern. Scrubbing the exhaust of these vents is highly recommended. Jurisdictional regulations should be consulted to determine required practices.

Special Materials to be Used for Packaging or Containers: Equipment for storage, handling or transportation should not made of: carbon steel, Copper and its alloys or Zinc and its alloys. Aluminum and its alloys should not be used in equipment for storage, handling or transportation. Confirm suitability of any material before using.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Recommendations listed in this section indicate the type of equipment which will provide protection against overexposure to this product. Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.

ENGINEERING CONTROLS

Engineering Controls: Local exhaust ventilation required. Ventilation should be corrosion proof. Make up air should be supplied to balance air that is removed by local or general exhaust ventilation. Ventilate low lying areas such as sumps or pits where dense vapours may collect.

For personnel entry into confined spaces (i.e. bulk storage tanks) a proper confined space entry procedure must be followed. Such a procedure must include consideration of, among other things, ventilation, testing of tank atmosphere, provision and maintenance of SCBA, and emergency rescue.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Eye Protection: Use full face-shield and chemical safety goggles when there is potential for contact.

Skin Protection: Gloves and protective clothing made from rubber or plastic should be impervious under conditions of use. Discard contaminated gloves.

An analysis of available data shows the chemical resistance of a material can decrease when it is exposed to a solvent mixture: Although few such studies are available for review, dramatic decreases in permeation (break through) times have been observed. The importance of testing protective barriers before using a solvent mixture cannot be overstressed. Prior to use, user should confirm impermeability.

Respiratory Protection: No specific guidelines available. A NIOSH/MSHA-approved air-purifying respirator equipped with dust, mist, fume cartridges for concentrations up to 2.0 mg/M3 Sodium Hydroxide. An air-supplied respirator if concentrations are higher or unknown.

Other Personal Protective Equipment: Wear an impermeable apron and boots. Locate safety shower and eyewash station close to chemical handling area. Take all precautions to avoid personal contact.

EXPOSURE GUIDELINES

Recommended Exposure Limit: None established for this product.

Sodium Hydroxide

ACGIH TLV	(STEL)	2 mg/M2 (Ceiling)
OSHA PEL	(STEL)	2 mg/M3 (Ceiling)
NIOSH REL	(STEL)	2 mg/M3 (Ceiling)

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid.
Appearance and Odour: Pale yellow liquid. Mild odour.
Odour Threshold (ppm): Not available.
Boiling Range (Deg Celsius): 106.
Melting/Freezing Point (Deg Celsius): Not available.
Vapour Pressure (mm Hg at 20 Deg. Celsius): Not available.
Vapour Density (Air = 1.0): Not available.
Relative Density (gm/cc, Water = 1.0): 1.3 to 1.4.
Bulk Density: 1.300 to 1.400 Kg/M3.
Viscosity: Not available.
Evaporation Rate (Butyl Acetate = 1.0): Not available.
Solubility: Soluble in water.
% Volatile by Volume: 49.0 to 50.0.
pH: 11.0 to 13.0 (1% Aqueous Solution).
Coefficient of Water/Oil Distribution: Not available.
Volatile Organic Compounds (VOC): Not available.

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY

Under Normal Conditions: Stable.
Under Fire Conditions: Flammable.
Hazardous Polymerization: Will not occur.

Conditions to Avoid: High temperatures, sparks, open flames and all other sources of ignition.

Do not distill to dryness. Avoid excessive temperature or prolonged reflux, such as in batch distillation.

Materials to Avoid: Strong oxidizers. Lewis or mineral acids. Carbon steel. Copper and its alloys. Zinc and its alloys. Aluminum and its alloys. Reducing agents. Alkalies. Strong bases.

Decomposition or Combustion Products: Thermal decomposition products are toxic and may include ammonia, aldehydes, Ketones, oxides of carbon, nitrogen and sodium.

11. TOXICOLOGICAL INFORMATION

Toxicological Data:

Tetrasodium EDTA	LD50 (Oral, Rat) = 630 - 1,260 mg/Kg (3)
Sodium Hydroxide	LD50 (Dermal, Rabbit) = 1,350 mg/Kg (3)
Trisodium Nitrilotriacetate	LD50 (Oral, Rat) = 1,100 mg/Kg (1) LD50 (Oral, Mouse) = 681 mg/Kg (1)

Carcinogenicity Data: The ingredient(s) of this product is (are) not classified as carcinogenic by ACGIH (American Conference of Governmental Industrial Hygienists) or IARC (International Agency for Research on Cancer), not regulated as carcinogens by OSHA (Occupational Safety and Health Administration), and not listed as carcinogens by NTP (National Toxicology Program).

This product may contain a trace amount (less than 0.1%, w/w) of a carcinogen (Nitrolotriacetic Acid). Large dietary doses of Nitrolotriacetic Acid have caused urinary tumours in laboratory animals. There is little likelihood that Nitrolotriacetic Acid could cause cancer in humans, especially at subtoxic doses. (3)

Reproductive Data: Tetrasodium EDTA: The results of reproductivity tests in animals have been negative. See "Other Studies Relevant to Material".

Mutagenicity Data: Tetrasodium EDTA: The results of mutagenicity tests in animals have been negative or inconclusive. See "Other Studies Relevant to Material".

Teratogenicity Data: Sodium Salts of EDTA may cause teratogenic / embryotoxic effects based on studies in laboratory animals, but only at high, generally toxic doses. See "Other Studies Relevant to Material".

Respiratory / Skin Sensitization Data: None known.
Synergistic Materials: None known.

Disposal of Packaging: Empty containers retain product residue (liquid and/or vapour) and can be dangerous. Do not expose such containers to heat, flame, sparks, static electricity, or other sources of ignition: they may explode and cause injury or death. *Do not dispose of package until throughly washed* out.

14. TRANSPORTATION INFORMATION

CANADIAN TDG ACT SHIPPING DESCRIPTION:

Shipping Name: *Corrosive Liquids, NOS (Tetrasodium EDTA).*
Shipping Class/Division: 8(9.2).
Product Identification No (UN): UN1760.
Packing Group: III.
Label(s)/Placard(s): Corrosive.
Regulated Limit (9.2): Sodium Hydroxide: 50 Kg; This product: 1,300 Kg.
Exemptions: Not available.

U.S. DOT CLASSIFICATION: Not regulated. (3)

15. REGULATORY INFORMATION

CANADA

CEPA - NSNR: All constituents of this product are included on the DSL under the CEPA.

CEPA - NPRI: Not included.

Controlled Products Regulations Classification (WHMIS): E: Corrosive.

USA

Environmental Protection Act: All constituents of this product are included on the TSCA inventory under the US-EPA.

OSHA Hazard Communication (29CFR 1910.1200) Classification: Corrosive.

HMIS: 2 Health, 1 Fire, 0 Reactivity. (3)

INTERNATIONAL: Not available.

16. OTHER INFORMATION

ADDITIONAL INFORMATION AND SOURCES USED

1. RTECS-Registry of Toxic Effects of Chemical Substances, On-line search, Canadian Centre for Occupational Health and Safety RTECS database, Vol I-V, 1985-1986 edition, Doris V. Sweet, Ed., National Institute for Occupational Safety and Health, U.S. Dept. of Health and Human Services, Cincinnati, 1987.
2. Clayton, G.D. and Clayton, F.E., Eds., Patty's Industrial Hygiene and Toxicology, 3rd ed., Vol. IIA,B,C, John Wiley and Sons, New York, 1981.
3. Supplier's Material Safety Data Sheet(s).
4. "CHEMINFO", through "CCINFOdisc", Canadian Centre for Occupational Health and Safety, Hamilton, Ontario, Canada.
5. Guide to Occupational Exposure Values, 1995, American Conference of Governmental Industrial Hygienists, Cincinatti, 1995.
6. The British Columbia Drug and Poison Information Centre, Poison Managements Manual, Canadian Pharmaceutical Association, Ottawa, 1981.

To obtain revised copies of this or other Material Safety Data Sheets, contact your nearest Stanchem Regional office.

Stanchem Regional Offices:

Stanchem Inc., 800 Terminal Avenue, Vancouver, British Columbia, V6A 2M8
Phone: (604) 685-1411 Facsimile: (604) 681-5218

Stanchem Inc., 6628 - 45 th. Street, Leduc, Alberta, T9E 7C9
Phone: (403) 986-4544 Facsimile: (403) 986-1070

Stanchem Inc., 681 Plinquet Street, Winnipeg, Manitoba, R2J 2X2
Phone: (204) 233-5361 Facsimile: (204) 233-7005

Stanchem Inc., 43 Jutland Road, Etobicoke, Ontario, M8Z 2G6
Phone: (416) 259-8231 Facsimile: (416) 259-6175

Stanchem Inc., 2900 Jean Baptiste Des., Lachine, PQ, H8T 1C8
Phone: (514) 636-9230 Facsimile: (514) 636-0877

Stanchem Inc., A-105 Akerley Boulevard, Dartmouth, Nova Scotia, B3B 1R7
Phone: (902) 468-9690 Facsimile: (902) 468-3085

Prepared By: Regulatory Affairs Group, Stanchem Inc., (416) 259-8231.

hci stanchem

STANCHEM INC., 2900, boul. J.-B.-Deschamps, Lachine (Québec) H8T 1C8 • Tél.: (514) 636-9230 Téléc.: (514) 636-0877

MESSAGE PAR TÉLÉCOPIE/FAX MESSAGE

Pages : (1) inclusant celle-ci/including this one	*DATE :* January 6, 1999

DESTINATAIRE/ADDRESSEE : Mel
ENTREPRISE/COMPANY : Dilchem
Nº DE TÉLÉC/FAX Nº : (401) 727-0752

EXPÉDITEUR/SENDER : *Caroline Bédard, ingénieure/Engineer* *Service technique/Technical Service*	*Nº de tél./Tel. Nº : (514) 636-9230* *Nº de téléc./Fax Nº : (514) 636-8229*

MESSAGE

Good afternoon Mel,

I just want to confirm that there is no volatile organic compounds in EDTA. Because of the metallic carbides, the EDTA has no atmospheric photochemical reactions.

Regards,

Caroline Bédard

(Réf. fax.cb)

MATERIAL SAFETY DATA SHEET

100000071/F/USA
Approval Date: 09/24/1992
Print Date: 11/11/1992
Page 1

EXHIBIT "B"- 21

not on F List

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: "EKTASOLVE" DE Solvent

Product Identification Number(s): SPC 25902

Manufacturer/Supplier: Eastman Chemical Company, A Division of Eastman Kodak Company, Kingsport, Tennessee 37662

MSDS Prepared by: Material Safety Program, Eastman Chemical Company, A Division of Eastman Kodak Company, Kingsport, TN 37662

For Emergency Health, Safety & Environmental Information, Call: 800-EASTMAN

For Emergency Transportation Information, Call CHEMTREC: 800-424-9300 or call: 800-EASTMAN

For Other Information, Call your Eastman representative or the Eastman operator 615-229-2000 (USA)

Chemical Name: 2-(2-ethoxyethoxy)ethanol

Synonym(s): KAN 902413; PM 01799-00; diethylene glycol monoethyl ether

Molecular Formula: C6H14O3

Molecular Weight: 134.18

Product Use: solvent

2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight %	Component	(CAS Registry No.)
100	diethylene glycol monoethyl ether	(000111-90-0)

3. HAZARDS IDENTIFICATION

WARNING!
PEROXIDE FORMER
COMBUSTIBLE LIQUID AND VAPOR

HMIS Hazard Ratings: Health - 1, Flammability - 2, Chemical Reactivity - 0

NFPA Hazard Ratings: Health - 1, Flammability - 2, Chemical Reactivity - 0

NOTE: HMIS and NFPA ratings involve data and interpretations that may vary from company to company. They are intended only for rapid, general identification of

Dermal study (rat): NOEL for maternal toxicity = 7 g/kg (highest dose tested); NOEL for developmental toxicity = 7 g/kg (highest dose tested)

Reproductive Toxicity Data: Oral study (rat): LOEL = 950 mg/kg/day (decrease in growth rate) (target organ effects: bladder)

Dermal absorption rate (human, in vitro): 0.125 mg/cm2/hour

12. ECOLOGICAL INFORMATION

Introduction: This environmental effects summary is written to assist in addressing emergencies created by an accidental spill which might occur during the shipment of this material, and, in general, it is not meant to address discharges to sanitary sewers or publically owned treatment works.

Summary: Data for this material have been used to estimate its environmental impact. It has the following properties: a moderate biochemical oxygen demand and may cause oxygen depletion in aqueous systems, a low potential to affect aquatic organisms, a low potential to affect secondary waste treatment microbial metabolism, a moderate potential to biodegrade (moderate persistence) with unacclimated microorganisms from activated sludge, a low potential to bioconcentrate. When diluted with a large amount of water, this material released directly or indirectly into the environment is not expected to have a significant impact.

Oxygen Demand Data:

BOD-5: 0.14 g oxygen/ml
BOD-20: 1.9 g oxygen/ml
COD: 1.9 g oxygen/g

Acute Aquatic Effects Data:

24-h LC-50 (goldfish): >5000 mg/L
96-h LC-50 (bluegill sunfish): >10,000 mg/L

Secondary Waste Water Treatment Effects: 5-hour IC-50: >5000 mg/L

13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Incinerate.

Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

- DOT (USA) Classification: for quantities of 110 gal or less: not regulated;

- European Inventory of Existing Commercial Chemical Substances (EINECS): This product is listed on EINECS or has been approved in the European Community by new substance notification.

- Australian Inventory of Chemical Substances (AICS) and National Industrial Chemicals Notification and Assessment Scheme (NICNAS): This product is listed on AICS or otherwise complies with NICNAS.

- Japanese Handbook of Existing and New Chemical Substances: This product is listed in the Handbook or has been approved in Japan by new substance notification.

16. OTHER INFORMATION

US/Canadian Label Statements:

WARNING!
PEROXIDE FORMER
COMBUSTIBLE LIQUID AND VAPOR

Keep away from heat and flame.
Keep container closed.
Store away from heat and light.

IN CASE OF FIRE: Use water spray, dry chemical, carbon dioxide (CO2), alcohol foam. Use water spray to keep fire-exposed containers cool.

IN CASE OF SPILL: Eliminate all ignition sources. Flush spill area with water spray. Prevent runoff from entering drains, sewers, and streams.

Since emptied containers retain product residue, follow label warnings even after container is emptied.

CAUTION: FOR MANUFACTURING, PROCESSING OR REPACKING BY TRAINED PERSONNEL

The information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.

EASTMAN

Malcolm Baldrige National Quality Award 1993 Winner Eastman Chemical Company

100000081/F/USA
Approval Date: 12/04/1995
Print Date: 12/14/1995
Page 1

EXHIBIT "B"- 22

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: "EASTMAN" DBP Plasticizer

Product Identification Number(s): SPC 14917

Manufacturer/Supplier: Eastman Chemical Company, Kingsport, Tennessee 37662

MSDS Prepared by: Eastman Health, Safety, and Environmental Services, Eastman Chemical Company, Kingsport, TN 37662

For Emergency Health, Safety & Environmental Information, call 800-EASTMAN

For Emergency Transportation Information, call CHEMTREC at 800-424-9300 or call 800-EASTMAN

For Other Information, call your Eastman representative or the Eastman operator at 423-229-2000 (USA)

Chemical Name: 1,2-benzenedicarboxylic acid, dibutyl ester

Synonym(s): PM 00081-00; EAN 901403; dibutyl phthalate

Molecular Formula: C16H2204

Molecular Weight: 278.35

Product Use: plasticizer

Not on T-List

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight % - Component - (CAS Registry No.)

100 dibutyl phthalate (000084-74-2)

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3. HAZARDS IDENTIFICATION

HIGH ORAL DOSES OF THIS MATERIAL CAUSE ADVERSE REPRODUCTIVE EFFECTS IN LABORATORY ANIMALS - SEE MSDS FOR DETAILS

HMIS Hazard Ratings: Health - 1, Flammability - 1, Chemical Reactivity - 0

NFPA Hazard Ratings: Health - 0, Flammability - 1, Chemical Reactivity - 0

NOTE: HMIS and NFPA ratings involve data and interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately

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ACGIH Threshold Limit Value (TLV): 5 mg/m3 TWA

OSHA (USA) Permissible Exposure Limit (PEL, 1989 Table Z-1-A values or section-specific standards): 5 mg/m3 TWA

Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: mist. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 29 CFR 1910.134.

Eye Protection: It is a good industrial hygiene practice to minimize eye contact.

Skin Protection: It is a good industrial hygiene practice to minimize skin contact.

Recommended Decontamination Facilities: eye bath, washing facilities

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9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical Form: liquid
- Color: colorless
- Odor: odorless
- Odor Threshold: not applicable
- Specific Gravity at 20°C (68°F) (water = 1): 1.05
- Vapor Pressure at 20°C (68°F): 0.0000189 mbar (0.0000142 mm Hg)
- Vapor Density (Air = 1): 9.6
- Evaporation Rate: negligible
- Boiling Point: 340°C (644°F)
- Melting Point: -35°C (-31°F)
- Viscosity: not available
- Solubility in Water: 11.2 mg/L (negligible)
- pH: not available
- Octanol/Water Partition Coefficient: log P = 4.79, P = 61660
- Flash Point (Cleveland open cup): 191°C (375°F)
- Lower Explosive Limit at 236°C (457°F): 0.47 volume %
- Upper Explosive Limit: not available
- Autoignition Temperature (ASTM D2155): 404°C (759°F)
- Sensitivity to Mechanical Impact: insensitive at 100 kg-cm
- Sensitivity to Static Discharge: not available

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10. STABILITY AND REACTIVITY

testes) (only dose tested);

Oral study (21 days, rat): LOEL = 624 mg/kg/day (minor target organ effects: liver); NOEL = not established

Oral study (35-45 days, rat): LOEL = 2500 mg/kg/day (target organ effects: testes); LOEL = 250 mg/kg/day (target organ effects: liver) (reduced body weight gain); NOEL = 250 mg/kg/day (testes)

Oral study (90 days, rat): NOAEL = 120 mg/kg/day (minor target organ effects: liver); NOEL = not established

Oral study (105 days, mouse): NOAEL = 1300 mg/kg/day (minor target organ effects: liver); NOEL = 390 mg/kg/day

Chronic Toxicity Data:

Oral study (1 year, rat): NOEL = 0.125 % in diet (only concentration tested)

Developmental Toxicity Data:

Oral study (mouse): LOEL for maternal toxicity = 2100 mg/kg/day; NOEL for maternal toxicity = 660 mg/kg/day, NOEL for teratogenicity = 660 mg/kg/day; LOEL for embryo/fetotoxicity = 350 mg/kg/day

Oral study (rat): LOEL for embryo/fetotoxicity = 600 mg/kg/day; NOEL for developmental toxicity = 120 mg/kg/day

Reproductive Toxicity Data:

Oral study (mouse): LOEL for embryo/fetotoxicity = 1300 mg/kg/day; NOEL for developmental toxicity = 390 mg/kg/day

Dermal absorption rate (human, in vitro): 6.6 microgram(s)/cm2/hour
Dermal absorption rate (human, in vitro): 0.07 microgram(s)/cm2/hour

Mutagenicity/Genotoxicity Data:

Cell transformation assay: negative
Chromosomal aberration assay: equivocal
Mitotic recombination (Saccharomyces cervisiae) assay: negative (+/- activation)
Mouse lymphoma assay: positive (+ activation), negative (- activation)
Salmonella typhimurium assay (Ames test): negative

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12. ECOLOGICAL INFORMATION

Introduction: This environmental effects summary is written to assist in addressing emergencies created by an accidental spill which might occur during

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Radish: 100 microliter(s)/l
Lettuce: 100 microliter(s)/l

7-Day Plant Seedling Effects - No-adverse-effect concentration:

Marigold: 1000 microliter(s)/l
Radish: 1000 microliter(s)/l
Corn: 1000 microliter(s)/l
Lettuce: 1000 microliter(s)/l

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13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Incinerate.

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14. TRANSPORT INFORMATION

- DOT (USA) Status: regulated. Marine pollutant, net quantities less than 4.5 kg (10.0 pounds) are not regulated; the following requirements apply to larger quantities:
- Class 9, packing group III
- DOT Reportable Quantity: 10.0 lb (4.5 kg)

- Air - International Civil Aviation Organization (ICAO)
- ICAO Status: net quantities less than 4.5 kg (10 pounds) are not regulated; the following requirements apply to larger quantities:
- Class 9, packing group III

- Sea - International Maritime Dangerous Goods (IMDG)
- IMDG Status: marine pollutant, net quantities less than 4.5 kg (10 pounds) are not regulated; the following requirements apply to larger quantities:
- Class 9, packing group III

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15. REGULATORY INFORMATION

- This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.
- OSHA hazardous chemical(s): dibutyl phthalate

- California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): material(s) known to the State to cause cancer: none
- California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): material(s) known to the State to cause adverse reproductive effects: none
- Massachusetts Substance List: dibutyl phthalate
- New Jersey Workplace Hazardous Substance List: dibutyl phthalate
- Pennsylvania Hazardous Substance List: dibutyl phthalate

CAUTION: FOR MANUFACTURING, PROCESSING OR REPACKING BY TRAINED PERSONNEL

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.

The symbol ">" in the left margin denotes a revision in this section.

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

EXHIBIT "B"-23 MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
NEW ENGLAND CHEMICAL COMPANY	(1-603-424-5545)
ADDRESS (Number, Street, City, State, and ZIP Code): D.W. Highway, P.O. Box 340, Merrimack, New Hampshire 03054	
CHEMICAL NAME AND SYNONYMS: AMMONIUM HYDROXIDE	TRADE NAME AND SYNONYMS: AQUA AMMONIA, AMMONIACAL LIQUOR
CHEMICAL FAMILY: NITROGEN COMPOUNDS	FORMULA: NH_3 IN SOLN. (NH_4OH)

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
AMMONIUM HYDROXIDE (AQUA AMMONIA) IS COMMONLY DESIGNATED		
AS 26° (29.4% NH_3 in WATER) ~~CAS # 1336-21~~		
7664-41-7		

Water Flush

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	81°F	SPECIFIC GRAVITY (H_2O=1)	.8974
VAPOR PRESSURE (mm Hg.)		PERCENT, VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1)	
SOLUBILITY IN WATER	INFINITE		

APPEARANCE AND ODOR: COLORLESS LIQUID, STRONG PENETRATING ODOR.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	NONE	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA	NONE			
SPECIAL FIRE FIGHTING PROCEDURES	NONE			
UNUSUAL FIRE AND EXPLOSION HAZARDS	NONE			

(Continued on reverse side)

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
MAXIMUM ALLOWABLE CONCENTRATION OF (NH_3) IN AIR - 50 PPM.

EFFECTS OF OVEREXPOSURE
AMMONIA GAS (WHICH EXISTS ABOVE AQUA AMMONIA) OR AQUA AMMONIA IS A STRONG IRRITANT, ESPECIALLY TO EYES AND MUCOUS MEMBRANES. TOXIC BY INGESTION BOTH LIQUID AND VAPOR ARE IRRITATING, AND MAY CAUSE BURNS.

EMERGENCY AND FIRST AID PROCEDURES
REMOVE VICTIM TO UNCONTAMINATED AREA. FLUSH EXPOSED AREAS WITH COPIOUS AMOUNTS OF WATER. FLUSH EYES (IF EXPOSED) FOR AT LEAST 30 MINUTES OR UNTIL A PHYSICIAN ARRIVES. IF BREATHING HAS CEASED GIVE ARTIFICIAL RESPIRATION. IF AVAILABLE, ADMINISTER OXYGEN. CALL A PHYSICIAN.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	XX	

INCOMPATABILITY *(Materials to avoid)*

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	XX	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
FLUSH CONTAMINATED AREA WITH PLENTY OF WATER, AS AQUA AMMONIA IS INFINITELY SOLUBLE, THE MORE WATER ADDED, THE MORE DILUTED AND HARMLESS IT BECOMES.

WASTE DISPOSAL METHOD
IF NOT PROHIBITED, WASTE MAY BE DISPOSED OF BY DILUTING WITH LARGE AMOUNTS OF WATER AND WASHING SAME INTO ACCEPTED SEWER SYSTEMS.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)* NOT NORMALLY REQUIRED. IF EMERGENCY CONDITIONS MAKE PROTECTION NECESSARY, A FULL MASK IS PREFERRED.

VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL *(General)* NOT REQUIRED, BUT GOOD IDEA TO HAVE	OTHER

PROTECTIVE GLOVES RUBBER (NEOPRENE: GAUNTLET TYPE)	EYE PROTECTION GOGGLES

OTHER PROTECTIVE EQUIPMENT
RUBBER BOOTS, APRON, GLOVES, MASK (FACE SHIELD), HAT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
CAUTION IS ALSO A GOOD PRACTICE WITH AQUA AMMONIA.

OTHER PRECAUTIONS

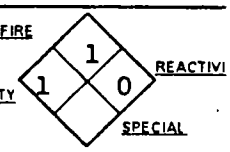
EXHIBIT "B"-24

ROHM AND HAAS COMPANY

CORPORATE PRODUCT INTEGRITY DEPARTMENT
INDEPENDENCE MALL WEST
PHILADELPHIA, PA 19105

EMERGENCY TELEPHONE
215-592-3000 (ROHM AND HAAS)
800-424-9300 (CHEMTREC)

HAZARD RATING
4=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
0=INSIGNIFICANT
*=SEE SECTION IV



MATERIAL SAFETY DATA SHEET

NOT OSHA HAZARDOUS

LIST 7

MATERIAL	CODE	KEY	DOT HAZARD CLASS
TRITON® CF-10 Surfactant	61597	904162-7	NONREGULATED
	DATE ISSUED 01/13/87		

FORMULA	CHEMICAL NAME OR SYNONYMS
C55 H96 O18	Octylphenoxypolyethoxyethyl benzyl ether nonionic surfactant

I – COMPOSITIONAL INFORMATION

	CAS REG. NO.	APPROX WT %	TWA/TLV R&H	OSHA	ACGIH
Alkylaryl polyether alcohol	NONHAZ	90	NE	NE	NE
Water	NONHAZ	10	NE	NE	NE

not on list

II – PHYSICAL PROPERTY INFORMATION

APPEARANCE - ODOR - pH.			VISCOSITY
Clear to slightly hazy, light amber liquid; mild odor			250 cps Brookfield
MELTING OR FREEZING POINT	**BOILING POINT**	**VAPOR PRESSURE (mm Hg)**	**VAPOR DENSITY (AIR=1)**
16C/60F pour point	NA	Nil @ 20C	NA
SOLUBILITY IN WATER	**PERCENT VOLATILE (BY WEIGHT)**	**SPECIFIC GRAVITY (WATER=1)**	**EVAPORATION RATE (BUTYL ACETATE=1)**
Complete	0	1.05-1.06	<1

III – FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT	AUTO IGNITION TEMPERATURE	LOWER EXPLOSION LIMIT (%)	UPPER EXPLOSION LIMIT (%)
260C />500F TOC	NA	NA	NA

EXTINGUISHING MEDIA

☐ FOAM ☐ "ALCOHOL" FOAM ☒ CO_2 ☒ DRY CHEMICAL ☒ WATER SPRAY ☐ OTHER

SPECIAL FIRE FIGHTING PROCEDURES

Wear respirator (pressure-demand, self-contained breathing apparatus, MSHA/NIOSH-approved or equivalent) and full protective gear.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Explosive mixtures may form by compounding with strong oxidizing and reducing agents.

IV – HEALTH HAZARD INFORMATION

ROHM AND HAAS RECOMMENDED WORK PLACE EXPOSURE LIMITS

None established

EFFECTS OF OVEREXPOSURE

Eye Contact: Slightly irritating to eyes.
Skin Contact: Slightly irritating to skin.

EMERGENCY AND FIRST AID PROCEDURES

Inhalation: Move subject to fresh air.

Eye and Skin Contact: Flush eyes with a large amount of water for at least 15 minutes. See physician if irritation persists. Wash affected skin areas with soap and water.

Ingestion: If swallowed dilute by giving 2 glasses of water to drink. See a physician. Never give anything by mouth to an unconscious person.

FORM SPDR REV 1183

V – REACTIVITY INFORMATION

TABILITY	CONDITIONS TO AVOID
[X] STABLE [ ] UNSTABLE	Excessive heat
I.ZARDOUS DECOMPOSITION PRODUCTS	None known

IAZARDOUS POLYMERIZATION	CONDITIONS TO AVOID
[ ] MAY OCCUR [X] WILL NOT OCCUR	None

NCOMPATIBILITY (MATERIALS TO AVOID)
[ ] WATER [X] OTHER Strong oxidizing and reducing agents.

VI – SPILL OR LEAK PROCEDURE INFORMATION

TEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
:vacuate the spill area. Floor may be slippery; use care to avoid falling. Wear eye >rotection. Dike and contain spill with inert material (e.g., sand, earth). Scoop or shovel ;olid material into a suitable container for recovery or disposal. Transfer liquid to :ontainers for recovery or disposal and solid diking material to separate containers for lisposal. Flush cleaned area with water to a contaminated (chemical) sewer. Keep spills and :leaning runoffs out of municipal sewers and open bodies of water.

WASTE DISPOSAL METHODS In accordance with local, state, and federal regulations: incinerate liquid; landfill contaminated diking material. (Landfill must be large enough to absorb the surfactant, because significant quantities reaching a stream or treatment plant via leachate can cause foaming.)

VII – SPECIAL PROTECTION INFORMATION

/ENTILATION TYPE
Normal room ventilation.

IESPIRATORY PROTECTION
Jone required if good ventilation is maintained. Wear respirator (MSHA/NIOSH-approved or equivalent) suitable for concentrations and types of air contaminants encountered.

'ROTECTIVE GLOVES	EYE PROTECTION
Impervious	Safety glasses (ANSI Z87.1 or approved equivalent)

)THER PROTECTIVE EQUIPMENT
Eyewash facility

VIII – STORAGE AND HANDLING INFORMATION

STORAGE TEMPERATURE MAX. MIN.	INDOOR	HEATED	REFRIGERATED	OUTDOOR
	YES	NO	NO	YES

Low temperature storage can cause handling problems. Viscosity of material will increase.

IX – TOXICITY INFORMATION

Oral LD50 rat: 2600 mg/kg; dermal LD50 rabbit: greater than 2 g/kg. Eye irritation rabbit: transient irridial and conjunctival effects. Score of 11 during first day and 0 by third day. Skin irritation rabbit: not irritating on intact skin; mild to moderate erythema on abraded skin.

X – MISCELLANEOUS INFORMATION

NE=None established

0031-0225

NA = NOT APPLICABLE C = CEILING VALUE	KEY	DATE OF ISSUE	SUPERSEDES
	904162-7	01/13/87	11/21/85

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

EXHIBIT "B"-25

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME: ORIGINAL BRADFORD SOAP WORKS INC.	EMERGENCY TELEPHONE NO.: 401-821-2114
ADDRESS (Number, Street, City, State, and ZIP Code): 200 PROVIDENCE ST. WEST WARWICK, R.I. 02893	
CHEMICAL NAME AND SYNONYMS: POTASH SOAP	TRADE NAME AND SYNONYMS: 40% LIQUID SOAP
CHEMICAL FAMILY: SOAP	FORMULA:

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)		SPECIFIC GRAVITY (H_2O=1)	1.034
VAPOR PRESSURE (mm Hg.)		PERCENT, VOLATILE BY VOLUME (%)	60
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (_____ =1)	
SOLUBILITY IN WATER	COMPLETE		
APPEARANCE AND ODOR	CLEAR, YELLOW, HEAVY LIQUID, "FATTY" ODOR		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel

EXTINGUISHING MEDIA

SPECIAL FIRE FIGHTING PROCEDURES

UNUSUAL FIRE AND EXPLOSION HAZARDS

(Continued on reverse side)

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

EFFECTS OF OVEREXPOSURE: SAME AS COMMON SOAP

EMERGENCY AND FIRST AID PROCEDURES: EYES- FLUSH WITH WATER

INGESTION- USUALLY NOTHING (NO EMETICS)

IF PROBLEMS, CONSULT PHYSICIAN

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	

INCOMPATABILITY *(Materials to avoid)*: ACIDS, METALLIC SALTS

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

FLUSH AWAY WITH WATER

WASTE DISPOSAL METHOD: NORMAL

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION *(Specify type)*

VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL *(General)*	OTHER

PROTECTIVE GLOVES

EYE PROTECTION: ALWAYS DESIREABLE

OTHER PROTECTIVE EQUIPMENT

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

NORMAL STORAGE, AWAY FROM HIGH HEAT

OTHER PRECAUTIONS

Lamco CHEMICAL COMPANY, Inc.
212 Arlington Street – Chelsea, Massachusetts 02150

August 19, 1987

SPILL PLAN

PURPOSE

The purpose of this plan is to establish a system to be followed in the event of a major spill or leakage. Leakages or spills may be caused by breakdown in equipment -- valves or pipes, malfunctioning of automatic shutoffs, cracks in kettles, holding tanks, drums and/or human failure.

SCOPE

The scope of this plan is to outline the necessary steps to be taken in the event of spillage and to form a coherent plan to cope with same.

TOOLS

Available on each floor and clearly marked are two (2) drums specifically set aside to aid in controlling spills. One of the drums contains absorbent material; the other contains a shovel with a plastic scoop and other protective gear to be used in the event of a hazardous spillage.

Area Code 617
884-8470 or 884-2266

Lamco CHEMICAL COMPANY, Inc.
212 Arlington Street – Chelsea, Massachusetts 02150

INSTRUCTIONS

Immediately upon noticing a spill, alert as many people as possible. First determine the source of the leakage -- where does it come from? Was it the cause of an accident? If yes, is anyone hurt? REMEMBER, the safety of personnel comes FIRST. Give first aid, call a doctor, etc. Once the source of the spill has been determined, try to contain it. (i.e. If it is an open water valve, close it.) In determining the spill, try to identify the material. Is it hazardous or not? If it is a hazardous material and leaking from an upper floor, make certain to put on protective clothing before working under it or with it. If possible, try to prevent further spillage. Above all, DO NOT PANIC. A leaking drum may be rotated so that the source of the leak has been neutralized. Next, attack the liquid that has leaked. There are three main reasons for containing a spill:

1. To contain a possible hazardfrom spreading.
2. To prevent damage to the inventory and reduce the work of removing wet boxes -- repacking, etc.
3. To prevent contamination.

Depending on the size and volume use mops and buckets to pick up small spills and absorbent material to absorb and dike larger spills.

0031-0229

Area Code 617
884-8470 or 884-2266

Lamco CHEMICAL COMPANY, Inc.
212 Arlington Street – Chelsea, Massachusetts 02150

If time permits, check MSDS's regarding instructions on spillage.

If an Ammonia spill, make certain to ventilate the area as much as possible.

An Isopropyl Alcohol spill calls for extreme caution not to cause sparks because of a possible fire hazard.

Liquid Caustic is highly corrosive and should not be in contact with skin.

Once the spillage has been contained and absorbed, it must be collected for special and proper disposal. Make certain that the area where the spill has occurred is clean and dry before reopening it for traffic.

REMARKS

Bear in mind that "spillage" is an accident. Try to find the reason for the accident so that it can be guarded against and not happen in the future. ABOVE ALL, LET COMMON SENSE PREVAIL. While we have written a plan to assist in emergency situations, not all and every possibility has been covered. There may be circumstances that no one could forsee. Again, we urge you to use common sense to deal with such situations.

Good luck and, hopefully, we will never need these instructions.

0031-0230

GLL/jrs

Exhibit 3

EXHIBIT
tabbies
3

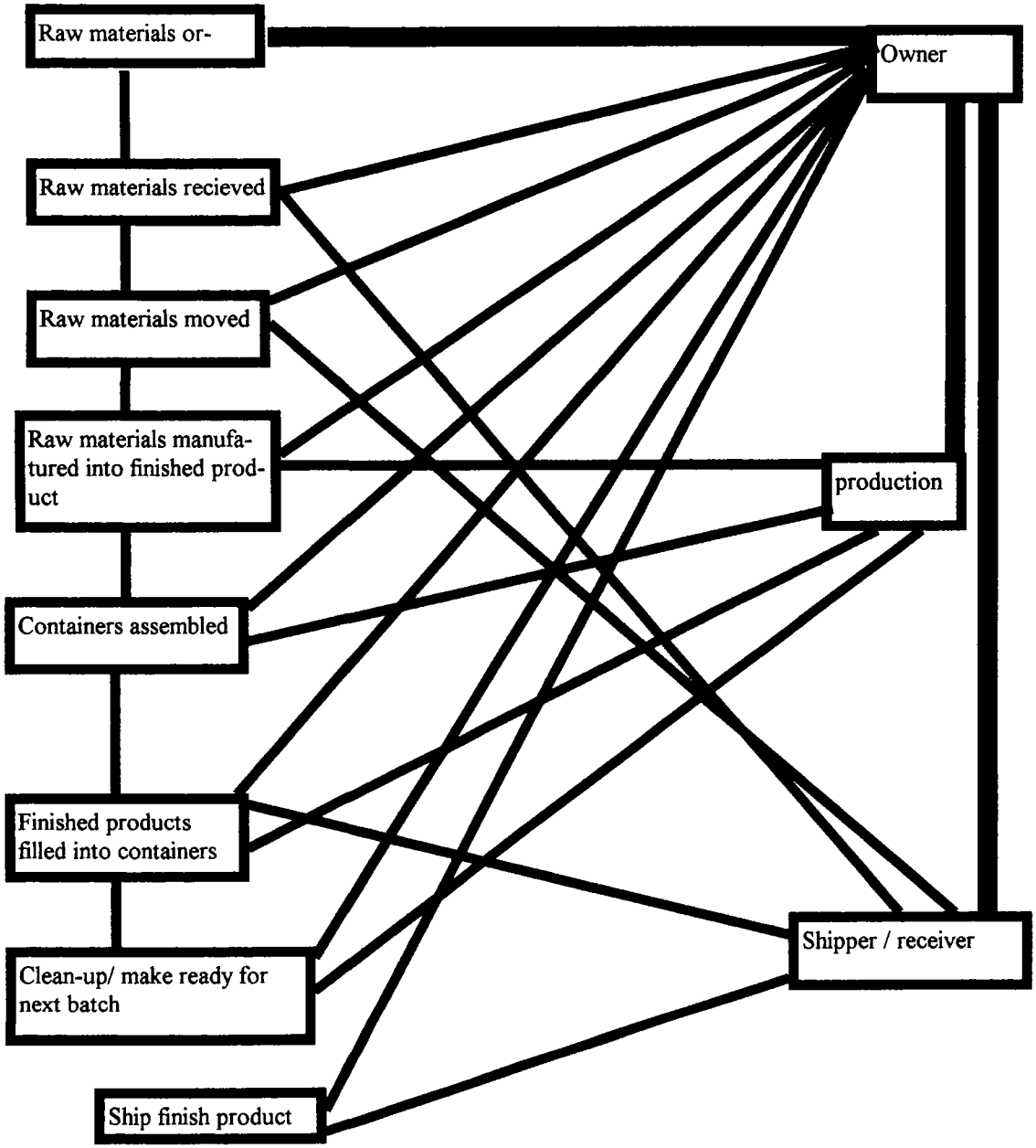
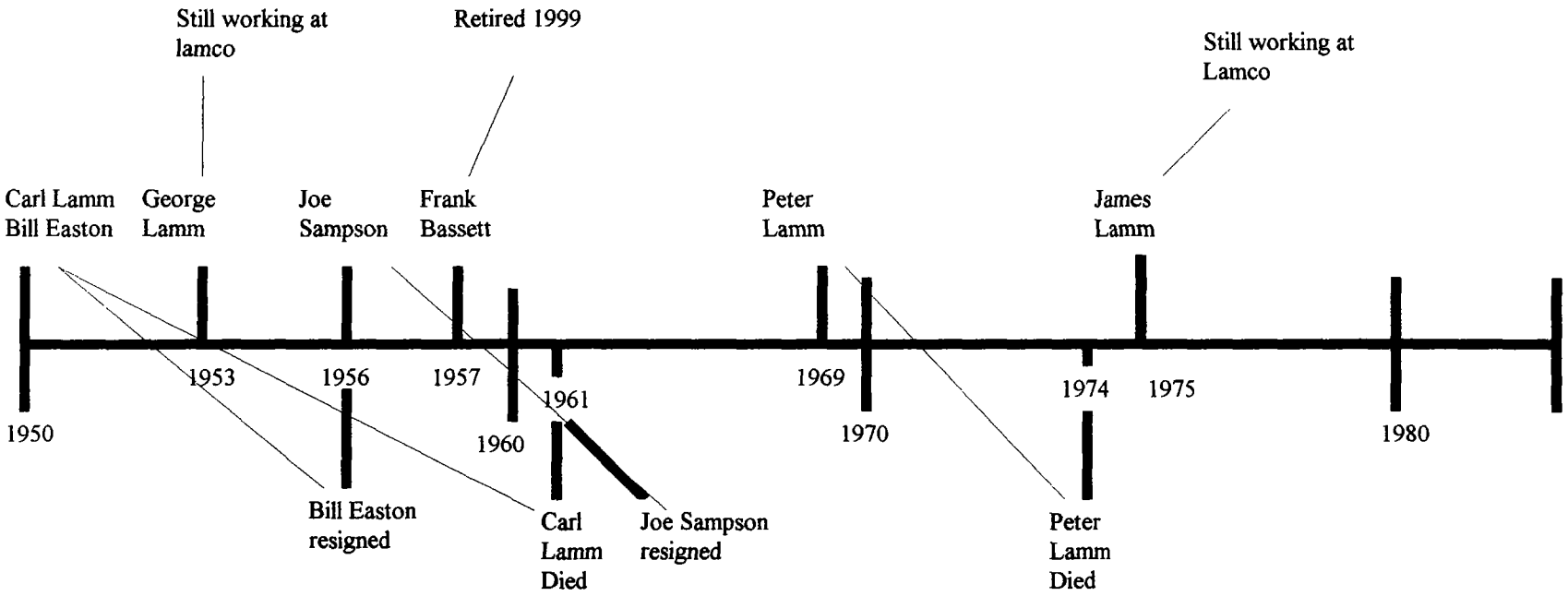


Exhibit 4

EXHIBIT 4 tabbies

0031-0232

Employees who had access to production. During 1950-1985



EXHIBIT
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ENCLOSURE E-WASTE SURVEY

Name of Respondent: Lamco Chemical Company Respondent's Location: Boston / Chelsea Date: 1950-85

	Substance	Physical State when Disposed/Type of Container (e.g. Liquid/5 gal pails, Sludge/55 gal drums, Solid/directly in dumpster.)	Trade Name/Chemical Composition (e.g. Nitric acid/HNO_3, Tetrahydrofuran/C_4H_8O.)	Volume (per month)	Disposal Method and Location (year) (e.g. dumpster('55-68), [Name] Landfill('69-81), [Name] Solvent Reclaimer('82-'91).
	Acids			0	
	Adhesives			0	
	Asbestos			0	
	Adsorbents (from spills, leaks, etc.)			0	
	Automotive Related Wastes:			0	
	Antifreeze			0	
	Batteries			0	
	Brake Fluids			0	
	Degreasers			0	
	Lubricants			0	
	Oils			0	

	Substance	Physical State when Disposed/Type of Container (e.g. Liquid/5 gal pails, Sludge/55 gal drums, Solid/directly in dumpster.)	Trade Name/Chemical Composition (e.g. Nitric acid/HNO_3, Tetrahydrofuran/C_4H_8O.)	Volume (per month)	Disposal Method and Location (year) (e.g. dumpster('55-68), [Name] Landfill('69-81), [Name] Solvent Reclaimer('82-'91).
	Oil Filters			0	
	Transmission fluids			0	
	other:			0	
	Batteries			0/ ~~1~~ 1975 -	after 1/36 Royal Battery - returned at purchase
	Bleaches		Volume	0	
	Caustics/Alkalis	as a bye Product of mfg Liquids were absorb with Rags		Rags dried out and Disposed of in city collection	
	Chemicals	"	" was	"	"
	Cleaning compounds or fluids	"	"	less than "	"
	Coolants			1 Pound 0	
water based	Degreasers	"	"	"	"
	Disinfectants	"	"	"	"
	Distillation Byproducts (Still Bottoms)			0	
	Dyes			0	
	Etching Solutions			0	
	Filters			0	

	Substance	Physical State when Disposed/Type of Container (e.g. Liquid/5 gal pails, Sludge/55 gal drums, Solid/directly in dumpster.)	Trade Name/Chemical Composition (e.g. Nitric acid/HNO_3, Tetrahydrofuran/C_4H_8O.)	Volume (per month)	Disposal Method and Location (year) (e.g. dumpster('55-68), [Name] Landfill('69-81), [Name] Solvent Reclaimer('82-'91).
	Flammable, Reactive, or Explosive Materials			0	
	Fungicides			0	
	Herbicides			0	
	Insecticides			0	
	Insulating/Fire Proofing Materials			0	1 gallon P/year
	Laboratory Wastes	Solid		+/- 20 oz P/month	city trash
	Lubricants			0	
	Metals:			0	
	grindings			0	
	powders			0	
	shavings			0	
	sludges			0	
	solutions			0	
	other:			0	
	Paint and Coating Wastes:			0	

	Substance	Physical State when Disposed/Type of Container (e.g. Liquid/5 gal pails, Sludge/55 gal drums, Solid/directly in dumpster.)	Trade Name/Chemical Composition (e.g. Nitric acid/HNO_3, Tetrahydrofuran/C_4H_8O.)	Volume (per month)	Disposal Method and Location (year) (e.g. dumpster('55-68), [Name] Landfill('69-81), [Name] Solvent Reclaimer('82-'91).
	paint			0	
	pigments			0	
	stripper			0	
	stains			0	
	thinner			0	
	turpentine			0	
	varnish			0	
	other:			0	
	PCBs (polychlorinated biphenyls)			0	
	Pesticides			0	
	Photocopying Wastes:	returned cartridge to supplier 1/36			
	toners				
	other:			0	
	Photography Wastes:			0	
	developers			0	
	fixers			0	

	Substance	Physical State when Disposed/Type of Container (e.g. Liquid/5 gal pails, Sludge/55 gal drums, Solid/directly in dumpster.)	Trade Name/Chemical Composition (e.g. Nitric acid/HNO_3, Tetrahydrofuran/C_4H_8O.)	Volume (per month)	Disposal Method and Location (year) (e.g. dumpster('55-68), [Name] Landfill('69-81), [Name] Solvent Reclaimer('82-'91).
	Solvents			0	
	Waste Oils			0	
	Wood Preservatives			0	
	Other:			0	

	Substance	Physical State when Disposed/Type of Container (e.g. Liquid/5 gal pails, Sludge/55 gal drums, Solid/directly in dumpster.)	Trade Name/Chemical Composition (e.g. Nitric acid/HNO_3, Tetrahydrofuran/C_4H_8O.)	Volume (per month)	Disposal Method and Location (year) (e.g. dumpster('55-68), [Name] Landfill('69-81), [Name] Solvent Reclaimer('82-'91).

EXHIBIT: 6

EXHIBIT 6

The Commonwealth of Massachusetts

SEWERAGE DIVISION

The City of
Chelsea, Massachusetts
and
The Metropolitan
District Commission

INDUSTRIAL USER DISCHARGE PERMIT

Number: 11 000 612-1

Category: 3

Expiration Date: January 31, 1984

LAMCO CHEMICAL COMPANY, INC.
212 Arlington Street
Chelsea, MA 02150

Gentlemen:

Pursuant to federal, State, and local regulations LAMCO CHEMICAL COMPANY, INC. (Industrial User) is hereby authorized to discharge sanitary sewage into the MDC sewerage system through the Chelsea sewerage system subject to the conditions set forth in Paragraphs 1, 2, 3, 4, 5, and 6 on the back of this permit.

This permit may be modified by the Metropolitan District Commission (MDC) and the Municipality, acting jointly, as required or authorized by the MDC Sewer User Rules and Regulations, or as required by the federal government or agencies thereof.

Failure on the part of the Industrial User to fulfill any of the specified conditions shall be sufficient cause for immediate revocation of this permit. This permit is further subject to termination upon thirty (30) days written notice to the Industrial User by an authorized representative of the Commission.

Any assignment or transfer of this permit shall automatically make it void.

APPROVED:
City of Chelsea, Massachusetts

JESSE W. NEIL
Authorized Municipal Official

City Engineer
Title

Jesse W. Neil 12/29/81
Signature Date

APPROVED:
Metropolitan District Commission

WAYNE T. GRANDIN
Name

Chief Engineer of Industrial Waste
Title

Wayne T. Grandin 1/6/82
Signature Date

AK
1111

PERMIT CONDITIONS*

1. The Industrial User shall comply with the "Rules and Regulations Covering Discharge of Sewage, Drainage, Substances, or Wastes to Sewerage Works Within the Metropolitan Sewerage District" or with Federal Regulations if more stringent. (Article II, Section 4 and Article IV, Section 4)**

2. The Industrial User shall allow Metropolitan District Commission (MDC) and Municipal personnel access to premises for inspection or sampling related to conditions of this permit. (Article II, Section 7(b))

3. The Industrial User shall promptly report to the MDC any changes in location, industrial processes, discharges (quantity or quality), or chemical storage procedures. (Article IV, Section 2)

4. The Industrial User shall notify the MDC immediately in the event of any accident, negligence or other occurrence that results in discharge to the public sewerage system of any wastes or process wastewaters not covered by this permit; notification shall be made immediately by phoning the MDC at 727-5253, 7:45 AM to 5:00 PM, Monday through Friday and 523-1212 at all other times and by submitting a written report *within 24 hours,* addressed to the Metropolitan District Commission, Sewerage Division, 20 Somerset Street, Boston, Massachusetts 02108. (Article II, Section 8)

5. The Industrial User shall discharge wastewater in conformance with the information contained in the permit application on file with the MDC Sewerage Division. (Article IV, Section 2)

6. The Industrial User's discharge shall conform to the wastewater flows and characteristics listed in Attachment "A". (Article IV, Section 2(c))

7. The Industrial User shall submit a signed Report as described in Attachment "B" to the municipality and the MDC according to the schedule stated in Attachment "B". (Article IV, Section 2(c))

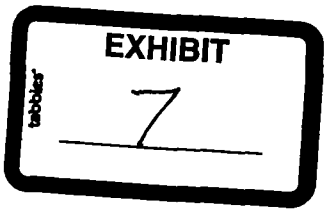
8. The Industrial User shall comply with the pretreatment requirements and schedule in Attachment "C". (Article II, Section 4 and Article IV, Section 2(c))

* Only the paragraphs cited in the Permit letter are applicable.

** References are to the MDC Rules and Regulations.

EXHIBIT: 7

J February 1, 1978



MEMO

SUBJECT: Toxic Substances Control Act - Inventory Reporting

Based on perusal of questions and answers of the final inventory reporting regulations plus inventory reporting requirements as contained in the Federal Register dated December 23, 1977, Part 4, Paragraphs 710.2 (x) and 710.3 (a)(1)(i) and 710.3 (a) (B) (ii) plus a telephone call to the Washington Office, it has been determined that this company is not required to file under this Act.

Reasons:

1. We are a small manufacturer with less than 5 million worth of sales.

2. We do not manufacture any single product that is contained in the TSCA list of 100,000 lbs. or more nor is 30% of any single product that we manufacture and contained on the list applicable.

LAMCO CHEMICAL CO., INC
212 ARLINGTON STREET
CHELSEA, MA 02150

TEL. [illegible]
Area Code 617

Lamco CHEMICAL COMPANY, Inc.
212 Arlington Street – Chelsea, Massachusetts 02150

EXHIBIT
8

EXHIBIT: 8

February 22, 1978

MEMO

SUBJECT: Toxic Substances Control Act

Based upon review of the above referenced Act (Federal Register IV dated December 27, 1977), the following Lamco manufactured products must be considered "chemical substances".

A: All soaps manufactured from soya fatty acid and reacted with KOH (61790-24-7 R325-6776 - Fatty Acids, Soya Bean Oil, Potassium Salts)

B: All soaps manufactured from soya fatty acid and reacted with amines (61790-18-9 R325-6102 - Amines, Soya, Alkyl)

The total net weight of these products manufactured in 1977 is as follows:

Category A - 31 batches of Wax & Dirt Remover
22 batches of Ammoniated Stripper
8 batches of Super Stripper
10 batches of Removit
11 batches of Pine Scrub Soap

TOTAL: 82 batches with a net weight of soap portion only (ie; the chemical substance) of 208½ lbs. per batch for a total of 17,097 lbs.

10 batches of Pine Cleaner and Deodorizer
Net soap content - 118.8 lbs. per batch for a total of 1188 lbs.

5½ batches of Basic Soap with a net weight content of 237.6 lbs. per batch for a total of 1306.8 lbs.

Total net weight of Catagery A of all batches is 19,591.8 lbs.

Added to this - 26½ batches of Miracle Cleaner (Group B above) with a net total per batch of 230 lbs. and a sub-total of 6095 lbs.

This brings the grand total of chemical substances manufactured to 25,686.8 lbs.

The total gallonage of all chemical specialties manufactured in 1977 is about 81,000 gallons or, roughly, 680,400 lbs. gross weight.

(over)

Area Code 617

Lamco CHEMICAL COMPANY, Inc.
212 Arlington Street – Chelsea, Massachusetts 02150

These are mostly chemical mixtures as defined in the Act such as floor finishes, floor waxes, window cleaners, bowl cleaners, all purpose cleaners, shampoos, etc.

Based on a conservative estimate, the total net weight of these products based on a 15% solid content is 102,060 lbs.

Since the total poundage of our chemical substances (25,687 lbs.) falls short of the 30% rule, our factory is not considered a - Chemical Manufacturing Plant Site under the Act and, therefore, it is our opinion that reporting under the Act is not necessary for Lamco Chemical Company, Inc.

NOTE: The only question that arose to add additional products to this was the manufacture of Wax Emulsions. These, however, are excluded from the Act (Para. 710.4)(d)(7) - "A chemical substance which results from a chemical reaction that occurs when emulsified".

TOK

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

REPORT OF ANALYSIS

1. SAMPLE NO.	2. DATE COLLECTED
227055	3-30-81
3. REGION	**4. EPA REG. NO.**
01	2716-25
5. ESTABLISHMENT NO.	
2716-MA-1	

EXHIBIT
tabbies 9

6. DESCRIPTION OF SAMPLE

1 x 1 gallon plastic jug/purple liquid

7. NAME AND ADDRESS OF ESTABLISHMENT WHERE SAMPLE WAS COLLECTED *(Include ZIP code)*

Lamco Chemical Co.
212 Arlington Street
Chelsea, MA 02150

8. PR
La
Bisadet
Cleaner

9. LOT OR CODE NUMBER(s)

XM11

10. NAME AND ADDRESS OF PRODUCER *(If different from 7 above) (Include ZIP code)*

-

11. RESULTS OF ANALYSIS

Sample was analyzed and found to be chemically satisfactory

"The information contained in this report should not be used in the labeling, advertising or other promotion of the product analyzed."

"THIS REPORT PERTAINS TO THE CHEMICAL ANALYSIS OF THE PRODUCT ONLY."

Sec. 9(a) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended *(7 U.S.C. 136g)* requires that if an analysis is made of any sample collected in connection with the enforcement of the Act, a copy of the results of such analysis must be furnished promptly to the owner, operator or agent in charge of the establishment where the sample was collected. This section of the Act is quoted on the reverse of this form.

The information contained in this report should not be used in the labeling, advertising, or other promotion of the product analyzed.

Additional information regarding results of analysis may be obtained from the individual listed below.

NAME AND TITLE OF EPA OFFICIAL	ADDRESS OF REGIONAL OFFICE *(Include ZIP code)*
PHONE NUMBER	**DATE**

EPA Form 3540-5 (Rev. 5-76) PREVIOUS EDITIONS ARE OBSOLETE.

0031-0245

ESTABLISHMENT COPY

REDACTED

REDACTED

REDACTED

REDACTED

REDACTED

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203

TO: Registered Pesticide-Producing Establishments

SUBJECT: Pesticides reports

The Federal Insecticide, Fungicide, and Rodenticide Act, as amended, requires each registered pesticide-producing establishment to report the types and amounts of pesticides produced at, and sold or distributed by, that establishment in calendar year 1979, and the anticipated types and amounts of production during calendar year 1980. Enclosed is the Pesticides Report form on which this information is to be submitted, and instructions for its completion. This form is to be completed and the original and first copy returned to this office by February 1, 1980. Written requests for extensions of up to 30 days will be considered. This form must be submitted even if you produced no pesticides in the past year and will produce none this year, or if all your production was and will be custom-blended products only.

Only those products actually produced at the reporting establishment are to be reported; products sold or distributed by but not produced at the reporting establishment are not to be included in this report. "Produce" has been defined by regulation to mean "manufacture, prepare, propagate, compound, or process any pesticide...or device, or to repackage or otherwise change the container of any pesticide or device" (40 CFR 167.1(c)).

It is unlawful to knowingly falsify all or part of any information submitted on the Pesticides Report or Chemical Formulation Report, or to fail to file such reports (Section 12(a)(2)(M) and (N), 7 USC 136e, 136f). Any information submitted on the Pesticides Report or Chemical Formulation Report other than the names of the pesticides or active ingredients used in producing pesticides produced, sold, or distributed at your establishment will be considered confidential.

For further information, please contact Mr. Palermo of my staff at (617) 223-5126.

Sincerely yours,

A. Charles Lincoln

A. Charles Lincoln, Ph.D.
Chief, Pesticides Branch
Air & Hazardous Materials Division

Enclosure

INSTRUCTIONS FOR PESTICIDES REPORT FOR PESTICIDE-PRODUCING ESTABLISHMENTS (EPA FORM 3540-16)

Section 7 of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, requires any producer operating a registered pesticide-producing establishment to inform the Environmental Protection Agency of the types and amounts of pesticides being produced, produced in the past year, and sold or distributed in the past year. This Pesticides Report is to be completed and the original and first copy returned to the EPA Regional Office indicated on the accompanying transmittal letter.

ITEM

1. EPA ESTABLISHMENT NUMBER Enter the establishment registration number assigned to the establishment, if not already preprinted.

2. ESTABLISHMENT NAME AND ADDRESS Enter name and address of establishment. If preprinted name or address is incorrect, make necessary changes.

3. SIGNATURE OF ESTABLISHMENT OFFICER Self-explanatory

4. TITLE Self-explanatory

5. DATE Enter the date of signature in month-day-year sequence.

6. TELEPHONE Enter telephone number of establishment, including area code.

Items A through J must be completed for each pesticide produced at the reporting establishment, including all EPA and State-registered pesticides, pesticides produced while product registration is pending, pesticides produced under Experimental Use Permit, and pesticides produced for export only. If an establishment produces a product registered by a different company, the reporting establishment should include that product on its report. A pesticide sold or distributed under several distributor labels should be reported only as a single product rather than reported separately for each label.

A. PRODUCT NUMBER AND CODE

1. If a product is Federally registered, enter EPA product registration number. Enter "1" under "Code." E.g. 0,0,1,2,3 | 1
2. If product has EPA registration pending, enter EPA file symbol. Enter "2" under "Code." E.g. 0,0,1,2,3 | R | 2
3. If product has EPA Experimental Use Permit, enter EPA permit number. Enter "3" under "Code." E.g. 0,0,1,2,3 | E,X,P,-,1,G | 3
4. If product does not come under any of above, leave product number blank and enter "4" under "Code." If product is assigned EPA Accession Number or a State registration number, enter this number as part of the product name (Item B below). For all "Code 4" products, except those having EPA Accession Numbers or State registrations, a Chemical Formulation Report must also be completed (see below).

B. PRODUCT NAME Enter product name exactly as it appears on the product label.

C. PRODUCT CLASSIFICATION Enter the one code best describing the product.

01 Insecticide	06 Nematocide	10 Antifouling paint
02 Fungicide	07 Plant regulator	11 Animal repellent
03 Rodenticide	08 Defoliant, Dessicant	12 Other pesticide (specify)
04 Herbicide	09 Disinfectant, Sanitizer, Germicide	13 Device
05 Algaecide		

D. PRODUCT TYPE Enter the one code best describing the type of production.
1 Technical material for manufacturing use only
2 Formulation or blending
3 Repackaging
4 Other (specify)

E. MARKET PRODUCED FOR Enter the code best describing the market for which the pesticide is produced.
1 United States
2 United States and export out of United States
3 Export out of United States only

F. USE CLASSIFICATION Enter the code for the use classification assigned to the pesticide.
2 Restricted Use
3 Unclassified

G. AMOUNT PRODUCED PAST YEAR Enter amount (pounds or gallons) of the product produced at the establishment in the immediately preceding calendar year. If establishment produced a technical product, part of which was used to produce a formulated product at the same establishment, report the total amount of technical produced. Foreign establishments report only the amount produced for shipment to the United States.

H. AMOUNT SOLD/DISTRIBUTED PAST YEAR Enter amount (pounds or gallons) of the product sold or distributed (i.e., released for shipment) by the establishment in the immediately preceding calendar year, regardless of when the product was produced. Foreign establishments report only the amount sold or distributed in the United States.

I. AMOUNT PRODUCED CURRENT YEAR Enter anticipated amount (pounds or gallons) of the product to be produced at the establishment in the current year. In all cases this figure will be considered an estimate of the current year's production. Foreign establishments report only the amount intended for shipment to the United States.

J. UNIT OF MEASURE Enter the unit of measure used in Items G, H, I.
L = pounds G = gallons R = other (specify unit)

If a continuation sheet is required, reproduce form or otherwise provide the required information in identical format. Number all continuation sheets in the upper right-hand corner as: Page___ of ___.

It is unlawful to knowingly falsify all or any part of any information submitted on the Pesticides Report or Chemical Formulation Report [section 12(a)(2)(M), 7 USC 136e, 136f]. The Pesticide Report will be treated as confidential pursuant to section 7(d) of FIFRA.

INSTRUCTIONS FOR THE CHEMICAL FORMULATION REPORT

In addition to completing the above, a Chemical Formulation Report must be submitted for any pesticide produced at the reporting establishment meeting the following criteria:

1. Pesticide is not registered with EPA or a State; and
2. Pesticide does not have EPA registration pending; and
3. Pesticide is not produced under an Experimental Use Permit, E.g., an unregistered pesticide produced for export out of the United States.

The Chemical Formulation Report must include:

1. The EPA Establishment Number assigned to the reporting establishment;
2. The Item Number (7, 8, 9 etc.) on the Pesticides Report and page number, if necessary, corresponding to the product for which the chemical formulation is given;
3. The product name exactly as it appears in Item 8 of the Pesticides Report; and
4. A list of the chemical names for each active and each inert ingredient used in the formulated product and the percentage of each by weight (total must equal 100%).

The Chemical Formulation Report will be treated as confidential pursuant to section 7(d) of FIFRA.

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